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PART FIRST.

## Original Communications.

ART. I.—*Further Thoughts on the Hypotheses of the Chemico-Physiological School.* By CHARLES CALDWELL, M.D., Professor of the Institutes of Medicine and Medical Jurisprudence, Louisville, Kentucky.

No. III.

WERE they not, perhaps, too near being identical in substance with matter contained in my last number, I would here propose a question or two to Dr. Roget, or any other member of the school in science to which he belongs.

Whether do organic combination and arrangement produce life, or life produce them? If the former do produce living organized matter, and its properties and functions, what does produce *them?*

In the formation of a living function-performing being—say the chick in the egg, or the human fœtus in utero—which of the two takes precedence in respect of time, *vital action* or *organization?*

These are points on which, from his high standing and bold pretensions in physiology, the Doctor ought to be able to throw some light; or, if he cannot do this, he should frankly confess his ignorance of them, and thus surrender his *conditions*, *suppositions* and *assertions* in relation to them. For, as heretofore stated, these are the forms of phraseology on the subject, in which he almost exclusively deals. To established facts, and legitimate and defensible inferences, in the present disquisition, he is a stranger.

One stricture more on the Doctor's hypotheses, and I am done with them for the present—and perhaps *for ever*.

He objects to the *unity* of the vital principle as the source of the phenomena of life, on account of the diversified functions, or forms of vital action, which living organized matter presents.

He contends that each of those different processes owes its existence to a different kind of vital principle, or spring of action. In other words, if I mistake him not, he believes that each organ, or different form of living

matter, which performs a function peculiar to itself, does so because it possesses a *vita propria*, or sort of life peculiar to itself. That the eye is endowed with a *vita propria*, because it sees—the ear, because it hears—the nose, because it smells—the liver, because it secretes bile—the lungs, because they arterialize the blood—and that, of course, the brain possesses numerous sorts of *vitæ propriæ*, because it is the seat and centre of the external senses, the source of voluntary motion, of animal propensity, of moral sentiment, and of intellectual action.

Notwithstanding the confident tone in which Dr. Roget announces this objection, and the feelings of triumph which he indulges, in what he regards as its impregnability, it is one of the weakest efforts and most palpable mistakes contained in his book.

Had the Doctor attributed to an *organizatio propria*, instead of a *vita propria*—a *special organization*, instead of a *special life*—the different forms of action and product presented in the economy of living organized beings, he would have shown himself to be an abler and more accomplished physiologist and inquirer, than I am now prepared to consider him. On the present point at least, his views would have been sounder and more easily made good. For, in the science of physiology, there is not a maxim more conclusively correct, than that, under the same sort of vital endowment, every organ of living matter acts in strict and undeviating conformity to its organization.

The stomach forms chyme, because it is fitly organized for that purpose; and no other organ in the body can perform the same function, because it wants that organization.

From its peculiar organization, the liver secretes bile, which no other organ can do, because it is not organized to that effect. For a like reason, the kidneys alone can secrete urine.

The lungs arterialize the blood, because they are, from their organization, lungs; and the heart contracts and expands, because, by its organization and structure, it is adapted to that form of action.

The muscles contract and relax, because of their muscular structure; and even the brain, spinal cord, and nerves, perform their numerous and diversified functions, because they are fitted to do so, by the organization bestowed on them.

Let the foregoing parts of the body be so altered in their organization and structure, that the liver shall be changed into the lungs, the lungs into the kidneys, and the kidneys into the salivary glands; and, under these metamorphoses, our author may impart to the altered organs whatever sort of life and vital properties he pleases, and he will fail to make them perform their present functions. Indeed, the very anticipation of such a result, from an experiment of the kind, would be Quixotic and ludicrous. Each portion of the body, if changed, will change its function, and act in conformity to its new organization.

In confirmation of my views on this topic, matter may be drawn abundantly from the principle of *gravity*, and the action of *steam*.

These are both *single* powers, each being, in its nature and tendency, *unique*. One of them acts exclusively toward the centre of the earth; and the other in every direction, by the *simple* property of *elasticity alone*.

Let the former of these, which is the source of action in our common time-pieces, be made to throw its influence on machinery constructed in one way; and the time will be told by two herculean figures, each armed with a massive club, which regularly appear, and give the correct account

of the hour, by the number of blows struck by them on a huge bell. Until a few years ago, a time-teller of this description had been attached for centuries, to a church in London (St. Dunstan's), situated in Fleet street, near Temple Bar.

On another form of machinery, bring this force to bear, and at the end of each hour, a singing bird will hop from its place of concealment and announce the time by chanting the requisite number of notes.

The machinery being of another construction, but the moving power the same, at the proper moment, two doors will fly open, an ox issuing from one of them, and from the other a butcher with a cleaver or a ponderous hammer in his hands. With that weapon the man inflicts on the forehead of the beast, a number of blows, the last of which performs the double office of telling the hour and felling the ox; when both the man and the beast disappear, and the doors close on them. And these varieties in the form of action, the principle of gravity being their sole moving cause, may be rendered indefinite in number, by varying the structure of the machinery which produces them.

Of steam, whose force, as already mentioned, is the product of elasticity, the same is true. The various sorts of action which it may be made to produce by different forms of machinery, is almost innumerable. Apply it to one sort of mechanical structure, and it propels a ship through the water—to another, it drives a locomotive engine over land—to a third, it throws cannon balls—to a fourth, it breaks and hackles flax and hemp—to a fifth, it cards cotton or wool—to a sixth, it spins—to a seventh, it weaves—to an eighth, it knits, or otherwise produces stockings—to a ninth, it draws water from a reservoir, and projects it through pipes, for the extinction of fire—to a tenth, it saws boards, planes them, drives nails, and thus forms out of them different sorts of carpenter-work and furniture.

But why should I push this detail any further? By the requisite machinery, which can be easily prepared, steam can be made to do almost everything that man can do by his muscular power, and the mechanism of his body. And vary, I repeat, to a sufficient extent, the organization of living matter (the vital principle continuing the same), and to the fifty or sixty different sorts of action now performed by the human body, tenfold that number may be added.

Against the foregoing facts and principles, in mass, let Dr. Roget, his associates and followers, including every member of the chemico-physiological school, array themselves in hostility, as soon and as resolutely as they please, and as dexterously as they can. Without meaning to boast of anything that I myself have done in the matter (for my task has been an easy one), I fearlessly assert that they will fail in their assault. Truth is impregnable.

As successfully, therefore, shall the Doctor and his cohorts attempt to resist or tranquillize the tempest, or stay the waves of the tempest-beaten ocean, as to subvert the positions laid down and contended for in the preceding pages. If he and his allies think otherwise, let them embark in the struggle, and an enlightened public will decide on the issue. This challenge is tendered in behalf of the *cause*, not of the power or efficiency of the challenger.

It was my intention, as already mentioned, to offer a few animadversions on the chemico-physiological hypotheses of Dr. Carpenter and his very learned and able fellow-laborer, Dr. Prichard. But I waive the

task at present, for two reasons. I have so far and unexpectedly protracted my examination of the sentiments of Dr. Roget, as not to feel at liberty to introduce into my discussion those of any other individual physiologist. And, as far as my memory serves me, there is no material difference between the chemical and physiological views of the two writers just named, and those on which I have already commented. Belonging, as they do, to the same sect, their creed can hardly fail to be also the same. It must be amenable, therefore, to the same tenor of opposition and remark. A few thoughts more, and my disquisition shall terminate.

Notwithstanding all the grave and erudite discussions that have been held by philosophers, on the subject of causation, it is an indisputable truth, that there are but two modes of arriving at a knowledge of causes sufficiently correct or even plausible, to justify us in attempting to decide whether they are the same or different from each other. And those modes are as conclusive as they are plain.

The first and most certain of them is, a strict and thorough examination of the causes themselves, having rendered them as subject as practicable to the action of our senses. In that case a knowledge of them as clear and satisfactory as comports with the condition of our faculties, in our present state of being, may be attained. Yet, even under this form of procedure, clouds and darkness too often dwell on them.

Of the existence and action of this class of causes we have illustration and proof in the following facts, the reality of which is universally admitted:

The sun's rising above the *eastern* horizon is the cause of day, and his descent below the *western*, the cause of night.

The influence of heat, light, moisture, and soil, is the cause which, in spring, produces vegetation; and the influence of cold in autumn and winter, the cause which arrests it.

And the agency of a severe blow on the head, brings an animal to the ground; and, as heretofore mentioned, that of steam suitably directed, propels a boat through the water, and a locomotive engine along the land. In these instances of action and effect, the causes may be regarded as positively known.

The second mode of inquiry consists in an examination equally strict, of the *effects* of causes (the causes themselves not being manifest or accessible), under circumstances as identical as possible; or if not identical, as similar as we can render them.

This mode, though not perhaps as decisive and satisfactory as the other, is, notwithstanding, sufficiently so to answer the common purposes of science.

Such is the creed to which I believe all philosophical inquirers adhere; and to which, as far as I can perceive, no reasonable objection can be offered. And its application to the topic I am considering, is direct and easy.

The immediate causes of chemical and vital action are too subtle and too deeply concealed in the recesses of nature, to be rendered the objects of any of our senses. They cannot be themselves, therefore, primarily examined; nor, of necessity, their identity or difference in that way ascertained.

As regards, however, the *effects* or products of chemical and vital causes, the case is different. They are easy of access, and may be sub-

jected to minute and thorough examination. And, according to a fundamental law of causation, whose soundness is far above controversy or cavil, were their sources identical with one another, they also would be identical. And by the same law, were their sources similar, they would be similar. But far otherwise is known to be the fact.

Under circumstances as much alike, as man, with his present amount of knowledge and power can render them, the effects of truly vital and truly chemical causes are as widely different from each other, as light is from darkness, good from evil, or virtue from vice; or as any other opposites which nature can form, or imagination conceive.

Of genuine chemical action the highest products are gases and crystalline substances, the latter including granite, spars, siliceous crystals, and other more precious stones, its most elevated production ending in the diamond. True, in the thunder-cloud and the tempest, the volcano and the earthquake, chemistry is also concerned; but so, in like manner, is mechanical force. Those manifestations, therefore, of elemental power and strife are not to be regarded as products exclusively chemical.

But, comparatively, what are these insensible, motionless, and meaningless masses, just referred to, among which there is neither an organ fitted for useful action, a single manifestation of wise or beneficent design, nor any other attribute of a lofty character—among which, in fact, all is mere passive existence and organless forms, *vis inertiæ* and the stillness of death?

From these *few* cold, inanimate and shapeless masses of matter, let us turn to the *countless*, self-moving, and operative products of vitality, each formed and fitted for the special action constituting its own economy, and mark the contrast in silence; because it is too vast and striking to be expressed in words.

Before us, in this survey, is spread out, in all the beauty and elegance of their forms, which words cannot depict, and clad in the fascinating brilliancy of their colors, the entire vegetable growth of the garden, the field and the meadow, the plain, the mountain, and the flower-clad prairie. And the picture is enlivened, and its enchantment heightened, by the presence, sports, and music of the animal kingdom, in all their attractiveness and innumerable diversities, each diversity characterized by its adaptation to a specific end.

The scene of vitality we are thus contemplating, embraces every grade of living existence, from the moss to the cedar, and from the animalcule, through the inhabitants of the water and the reptile race; the gorgeous insect tribe, the beautifully moulded and richly plumaged family of birds, and the multitudinous hosts of quadrupeds, up to man himself, the master-being and glory of the whole.

Let the gorgeous and magnificent pageant, thus placed before us, be examined and skilfully analyzed, and it will be found, in the structure and endowment of every object and product belonging to it, replete with manifestations of consummate wisdom and beneficence of design, and a corresponding power of appropriate action—the whole adapted to the production and maintenance of the welfare of each individual being, and of ultimate good to the mighty aggregate. Nor does truth permit us to deny, that such a spectacle, briefly and defectively as it is here depicted, comprises an array of objects as immeasurably transcendent (perhaps even more so) in their nature and attributes, over all that chemistry can

produce, than is the genius of a Shakspeare or a Milton over the grovelling propensities of the reptile or the worm.

And shall this stupendous and resplendent scheme of divine workmanship, including, as a part of it, man himself, formed, as we are assured, "in the image of his MAKER," and whose mighty powers of observation and discovery reach to the very confines of material creation, while his scope of thought calculates the distances, bearings, and movements of the heavenly bodies, and detects the laws which govern them in their orbits—shall this unspeakable array of grandeur and glory be degraded by the notions of the chemist and his operations in his laboratory, to the level of a mass of nitrate of potash, sulphate of iron, or muriate of soda!! O! monstrous vanity and audacity of over-ambitious and perverted science!! Yet does Dr. Roget minister, with all the weight of his reputation, and the whole force of his talents, to the increase of this portentous and overwhelming deluge of error, by openly contending for the identity of chemical and vital affinities!

If a notion so extravagantly wild and visionary be not the result of a degree of *hallucination* tantamount to *monomania*, then do I resign all pretension to a correct knowledge of the meaning of those terms. That it is at least the consummation of error and an unsurpassed prostitution of science, neither the sober-minded chemist, nor the enlightened and correctly informed physiologist will, I feel confident, venture to deny.

I have often requested chemico-physiologists to favor me with an intelligible and definite interpretation of the phrases, "vegetable chemistry," "animal chemistry," or "vital chemistry," or of all of them, at option. But never have I received from them a pertinent reply. Why? Because, as I verily believe, they are unable to frame a reply satisfactory either to themselves or to any other enlightened individual.

I now solicit the interpretation again; and not only will *I* feel obliged to, but *science* will be benefited by, him who shall impart it. By the beneficient and valuable act, light will be made to shine, and spread its salutary influence, where nothing but darkness has hitherto brooded and concealed the truth.

Were I fully informed of the real meaning of the preceding phrases, I might possibly concur in opinion respecting them, with those who employ them. But I can offer no concurrence in relation to anything which is beyond my comprehension.

Do chemico-physiologists design, by the phrases in question, merely to indicate the fact, that living organized beings are composed of the same elementary *ponderable* ingredients, which, in other cases, enter into the composition of substances *purely chemical?* If so, their proposition is but a *truism*, to which every one must assent. Oxygen, carbon, hydrogen, and azote, which constitute the essential elements of animals and vegetables, form many compounds and parts of compounds exclusively chemical.

But if it be contended that those ingredients are brought together in the same way and held together by the same force, in living organic and dead chemical matter; or that real chemical affinity has any agency in the formation of living organized bodies, whether animal or vegetable, or the slightest influence in the performance of their functions,—the position is utterly groundless and untenable.

Still, therefore, I call for the interpretation of the phrases; and if it be not rendered, I shall feel authorized to consider the words, so mystic-

ally or unmeaningly employed, as nothing but a veil for the concealment of ignorance; or, which amounts to the same artifice, as a crafty substitution of *sound* for *sense*, and an attempt to delude the unthinking, by the agency of phrases neither understood, nor defined in their meaning, by those who utter, or those who hear them.

A few remarks on a passage or two extracted from Müller's "Elements of Physiology" shall close this article.

In page 418 of Bell's edition of that most able and instructive work, we find the following extraordinary sentence:

"Substances which cannot be simply separated from the blood, since they do not pre-exist in it, but which, on the contrary, are newly produced from the proximate components of the blood, *by a chemical process*; such are the bile, *the semen*, the milk, *mucus*, &c.; these are called *secretions*."

I have pronounced this an extraordinary sentence, and such it unquestionably is; because its tendency is to fasten on us an extraordinary doctrine. If it be true, man is, *ab origine*, radically and essentially a *chemical product*. By a brief and correct analysis of the sentence, this position can be proved.

The semen masculinum, *one prime* and essential agent in the production of the living embryo, which, in time, becomes an adult, is, according to the foregoing extract, the result of a "*chemical* process." So is the "mucus" secreted by the ovarian vesicle of the female, which constitutes *the other* agent, or radical cause in the embryo-formation. Nor, as far as we know, is any third operative ponderable substance concerned in the work. By their action and influence on each other, the semen of the male and the ovarian mucus of the female give existence to the embryo, which is ultimately developed and moulded into an organized, living, and mature human being.

If this be true, then is man, with all his functions and attributes, as positively a chemical product as nitrate of potash, which is the issue of the mutual action of the two chemical substances, nitric acid and the oxide of potassium.

Now, it is obvious that these two substances, the male semen and the female mucus, are not to be regarded as *ultimate* products. They are means designed and fitted to effectuate a special end. In the formation of them, therefore, nature (I mean the Author of nature) had that end in view, and adapted them to its attainment. And it is an important end, being nothing less than the propagation and perpetuation of the human race.

But it is acknowledged by Dr. Roget, and other leading chemico-vitalists, that an essential and characteristic difference between chemical and vital products is, that the latter are always wisely and beneficially fitted for the accomplishment of some useful purpose; while the former are marked by no such aptitude. The following are the Doctor's words on this subject, some of which were quoted in my last number.

"The phenomena of living beings have a totally different character from the changes which take place in inanimate matter. * * * Living nature is impressed with a character which at once raises it to a *higher order* among the objects of human intellect, and invests the science which regards it with a *more lofty and ennobling sentiment*. Life is peculiarly characterized by the manifestation of INTENTION. *Adaptation of means to an end is visible throughout*

*the whole of this animated scene.* Express design is palpably discernible in every formation, in every arrangement, in every series of changes which this vast theatre of nature displays. And utility is the governing principle in all. * * * Thus, while the sciences of inorganic matter are founded on the relations of cause and effect, physiology takes cognizance more especially of *means to ends*, which the phenomena present to our view. Hence we obtain a new principle of arrangement among these phenomena; hence, also, arises a new source of interest, of a kind *very superior* to that which mere physical relations can ever inspire." (Pp. 15–17.)

According to this rule of judging, then, which I believe to be faultless, the two substances in question (the male semen and the female mucus) are vital products, even in opposition to the opinion of Müller.

On the following clause, extracted from the "Elements of Physiology" of the same distinguished writer, a similar comment may be correctly offered.

"*The chemical process of secretion* is not at all understood. The simple problem to be solved is, how the secreting membranes can, at the same time, and from the same blood, nourish themselves; that is, attract analogous particles and add them to their own substance, and also secrete or eliminate non-analogous particles; for the secreted fluid is, in its chemical properties, wholly different from the secreting organ." (P. 444.)

Here, again, the process described includes a two-fold wise and beneficent design—to nourish the organ and maintain its vigor, and to *depurate the blood* and *maintain health*.

The process, therefore, which acts to these effects is *essentially vital*; a truth which I trust Professor Müller will yet acknowledge.

In bringing to a conclusion, for the present, these strictures upon the hypotheses of the chemico-physiological school, allow me to trouble you with a few facts, in addition to those already transmitted to you, at open war with the *Liebigean* hypothesis of *vital temperature*—that hypothesis which contends that every living organized body, whether animal or vegetable, possesses a temperature exactly proportioned to the amount of the oxygen it takes into its system, and of the carbon and hydrogen it consumes in its *corporeal stove and gas-burner*, by *actual combustion*.

To begin with what the Professor of Giessen seems to consider the most powerful argument in favor of his hypothesis—the vast and gluttonous amount of oily food and drink which the Esquimaux, the Samoyedes, the Kamschatcans, and other hypeborrean people, swallow, to introduce into their systems the requisite amount of *carbon* and *hydrogen*; and the abundant quantity of oxygen they inhale, to set fire to those *combustibles*, and evolve the immensity of caloric necessary to keep them warm during the intensity of their winter cold.

The insufficiency of this argument is palpable. Those northern savages gorge themselves with as much oleaginous matter, and inhale, in a given time, even more oxygen during their summers, than they do during their winters. Yet does the difference between the temperatures of those two seasons of the arctic year amount, if I mistake not, during a principal part of their duration, to but little, if any, less than a hundred degrees.

The reason why I say that the savages of the polar circle inhale more oxygen in their summer than in their winter months is, because, during the former, they take, perhaps, in hunting and fishing, twenty times more

exercise than they do during the latter, a great proportion of which they devote to eating and sleeping. They, consequently, breathe more frequently and more fully during the summer. Nor is this all. They also breathe in the *open atmosphere*, where oxygen abounds.

Very different, however, is the case with them in the winter. During that season of surpassing cold they pass a great portion of their time, I say, in a state of drowsy gluttony and inaction, in their huts and caves, whose temperature is moderate, at least, if not actually *comfortable*; but whose atmosphere, instead of being rich in oxygen, is deeply surcharged and contaminated by carbonic acid, mingled with other foul and offensive exhalations from the lungs and skin.

In this situation, their acts of inspiration are neither full nor frequent; but, from their want of exercise, necessarily the reverse. Correspondingly limited, therefore, would be their inhalation of oxygen, did it even abound in the atmosphere *within* their air-tight dwellings in as high a degree as in that *without*. When we take into consideration, then, the copiously adulterated state of that atmosphere, we cannot escape the conviction, that the quantity of oxygen derived from it, by the savages who breathe it, is comparatively limited. And so, of course, are its effects on their systems. Nor are the savages of the north supplied very liberally with hydrogen, to aid in feeding the flame of their gas-burner. On the contrary, they are scantily supplied with it. They drink, as we are told, in the winter season, but very little water; and their oily food and drink contain, of hydrogen, but about *eleven-hundredths* of the whole amount of their elementary ingredients. Their stock of materials, then, to maintain a vestal fire in their bodies, is far from being abundant.

Nor is the evidence we derive from the history of the inhabitants of tropical Africa less pointedly and powerfully hostile to Professor Liebig's hypothesis. In the midst of a burning atmosphere, and under the immediate and cloudless path of the sun, those savages are, if possible, even more voraciously and boundlessly gluttonous than the inhabitants of the north. And much of their food is exceedingly fat and full of carbon. They drink water, moreover, in far greater abundance, and therefore swallow much more hydrogen than the hyperborean people; and, instead of close and crowded huts and caves, they live, by night as well as by day, almost exclusively under the canopy of the sky, and respire in a free and unadulterated atmosphere. Through the channels, therefore, of their lungs and alimentary canal, it cannot I think be questioned, that they receive into their systems as much, at least, if not more, of the elements of combustion, to feed and perpetuate their internal fires, than do the inhabitants of the arctic zone.

What disposition, then, is made of all the caloric thus evolved, to prevent it from urging to an inordinate height the temperature of the intra-tropical Africans? To this question the chemist will reply in his time-worn note of "PERSPIRATION, PERSPIRATION." But to a reply so flimsy and insufficient I shall not pause at present to rejoin.

Nor will I dwell on the groundless assertion of Professor Liebig, that birds and beasts of prey are more numerous and gluttonous in arctic than in tropical regions. Every schoolboy in zoology can correct the error. Had the Professor reflected, for a moment, on the never-failing aptitudes of nature, which everywhere present themselves to us, that act alone would have prevented his blunders. It would have taught him, that where *carrion* most abounds, *carrion eaters* are most wanted. But nature

never fails to supply her own wants. And perhaps *twenty* dead and putrid carcasses of animals corrupt the atmosphere of the tropics, for every *single one* that produces a like effect on the atmosphere of the arctic circle. And probably in the same ratio, kites, vultures, jackalls, hyenas, and other devourers of carrion, abound.

Without troubling you with a strict analysis of the subject, I say fearlessly, and without reservation, that one or the other of the two following positions is true:

1. Either the celebrated experiments of Fordyce, Banks, Blagden, Duhamel, Tilset, and others, respecting the effects of a very high temperature of the atmosphere on the body of man, are *incorrectly reported*; or,

2. The human constitution has some sort of agency, other than that of *perspiration*, to render caloric latent, and protect itself from the effects of a highly heated body of air.

Those enlightened and intrepid experimenters remained for a considerable time, *unharmed and without any painful sense of* burning, in an atmosphere of heat sufficiently intense to BROIL *beefsteaks*, and *make water* BOIL. Nor is this all. Even *one* of them, by entering the room when thus heated, reduced its temperature, in a few minutes, to the extent of *thirteen degrees!* and another of them, to the extent of *twelve* degrees.

Can the perspirable matter of one human body do this? Can such an agent remove or render latent, in so short a time, a very large volume of caloric, most of it at the distance of several yards? No, no, no! The very conception of such an effect being produced by a cause so limited, and obviously so inapt, involves what I feel authorized to pronounce an *unsurpassed absurdity*. The result was essentially the product of *vitality*. That this is true, appears from the fact, that the resistance offered by each experimenter to the temperature of the atmosphere, and the influence he exercised in lowering that temperature, were in proportion to the constitutional vigor (I mean the amount of vitality), which he possessed.

As regards Fordyce, Banks, and Blagden, the chemists contend that the temperature of the bodies of those gentlemen was prevented from rising, in a *highly* heated atmosphere, by *perspiration*. For the following additional reason, this is believed to be a mistake.

The experimenters had three rooms, the atmospheres of which were heated to different degrees, the range of specified heat being from 85° to 260° of Fahrenheit. Of these, the gentlemen, according to their report, perspired to the extent of *copious sweating* only in the rooms whose temperatures were comparatively *low*. We are not, I think, informed by them that *sweat* flowed from them in a temperature higher than 119° or 120° Fahr. When in a temperature from 224° to 260° Fahr., instead of "*exhaling*," their persons became "condensing bodies."

Are we not, from this representation, authorized to believe that a very highly heated atmosphere made on the skins of the experimenters an impression so *unnatural*, not to say *deleterious*, as to prevent entirely its function of secretion?

Most unquestionably, had sweat poured from the bodies of the gentlemen in quantity proportioned to the heat which acted on the surfaces of their bodies, they would have recorded the fact. But instead of doing that, they declare themselves to have been converted into active and even powerful *condensers*. The reason seems plain. Compared to the

surrounding atmosphere loaded with vapor, their bodies were actually *cold* (being lower in temperature by considerably upwards of 100° Fahr.), and their skins were rendered incapable of secreting. Far, therefore, from discharging anything *into* the atmosphere, they abstracted *caloric from* it, rendered that *imponderable* substance latent, and converted the vapor, around and in contact with them, into water, which ran in streams down their bodies.

In support of my suggestion that, under the influence of *excessive* temperature, the secretory action of the skin *may be*, and probably *is*, suspended, sundry plain and pertinent analogies may be adduced.

Inordinate pressure on the stomach prevents chymification; an intense glare of light suspends vision; sound inordinately loud, and powerful sound, such as the report of an adjacent cannon, produces deafness; a sapid substance, very highly stimulating, temporarily destroys taste; and an article extremely odorous, deadens for a time the function of smelling. In truth, the salutary action of any nerve, or set of nerves, is temporarily impaired or destroyed by an excess of impression.

Why, then, may not the secretory action of the skin, a process deeply and essentially under nervous influence, be also checked by a deleteriously powerful impression of heat? I propound the question, but cannot *to myself* satisfactorily answer it. I know not why such a cause may not be productive of such an effect. I am even much more inclined to believe that it is thus productive, than to search in vain for a reason why its action should lead to the opposite issue.

Spallanzani and Ingenhouse, I *know*, and, I *believe*, other able and accurate experimenters, assure us, that the carbonic acid gas, and its accompanying exhalations, adulterate more deeply and deleteriously a given quantity of atmospheric air, in a given time, in *hot* weather than in *cold*. According to the hypothesis of Liebig, the reverse of this should be true. Why? Because that writer asserts that a larger quantity of carbon and hydrogen is burnt *in* the human system, in cold weather, than in hot; and if so, the amount of the product of such burning thrown *out* of the system must be also greater, but is *less*. Hence the fallacy of Liebig's hypothesis.

Dreviranus, on the ground of his own experiments, asserts, that in an atmosphere at the temperature of 80½° Fahr., the honey-bee exhales *three times* as much carbonic acid gas as it does in an atmosphere at the temperature of 50½° of Fahr. How will Liebig and his followers account for this?

Müller informs us, that cold-blooded animals often consume, or in some way dispose of, in respiration, *three times* as much oxygen as they exhale of carbon. This fact alone comes down on the Giessenian theory with the destructiveness of a thunderbolt.

We are again told by Müller, that by man carbonic acid gas is exhaled in greater abundance when the barometer is *low* than when it is *high*. To explain this, in conformity to their hypothesis, will puzzle even the grand master himself. Am I asked, why I say so? I answer; because, when the barometer is low, the quantity of oxygen in a given volume of atmospheric air is comparatively small; and when it is high, the proportion is larger. In *direct*, and not in *inverse* proportion, therefore, to these different volumes of oxygen, should be the production and exhalation of carbonic acid gas. Once more.

Sir Benjamin Brodie ascertained, by experiments, whose accuracy is

not now held in doubt, that a rabbit full-grown and healthy, expires every half hour, 28·22 cubic inches of carbonic acid gas. And when the same rabbit is destroyed by poison or by bisecting its medulla oblongata, and artificial respiration is kept up in it, a quantity of the same gas, varying from 20·24 to 25·55 and 28·27 cubic inches, continues to be exhaled; yet the temperature of the animal falls, in the course of an hour, from six to eight degrees. Some experimenters assert that under the influence of artificial respiration, the temperature of the animal falls with greater rapidity than when that process is not employed. At any rate the experiments by Sir Benjamin, if skilfully and accurately performed, and correctly reported, satisfactorily show that when the *vitality* of an animal is extinguished, its temperature falls, notwithstanding the production of carbonic acid *in*, and its elimination *from*, its system, by artificial respiration.

Facts like the foregoing I could continue to detail almost interminably. And each of them would be alike fatal to the wild, dashing, and ill-concocted hypothesis of Liebig and his followers.

I presume it is not unknown to you, that the celebrated veteran Professor Hare, of Philadelphia, one of the ablest and most experienced and accurate chemists of the present day, or indeed of any day, has entered his protest against some of the writings of Liebig, proclaiming them, in his own strong and decided language, to be in "various instances, bold, hasty, inconsiderate, and inaccurate." And he, in further animadversion, likens that far-famed professor and ambitious innovator to a "military leader, who, after marching through a country with drums beating and colors flying, should have his trumpets loudly sounded, as if a complete conquest had been effected, while leaving behind him many fortresses, of which the knowledge had prevented more cautious and considerate leaders from having previously undertaken the same expedition." And the truly great chemist of Philadelphia further virtually declares, that "the philosopher of Giessen has deluded himself and the readers of his essays with the prospect of an elucidation of the mysteries of animal and vegetable physiology, *which it is beyond the present state of chemistry to afford*."

But, notwithstanding these condemnatory strictures on some of the notions set forth in "Animal Chemistry," Professor Hare has bestowed, on other views contained in that work, commendations which, coming from such high authority, ought to be amply satisfactory to the judgment, and flattering to the ambition of the distinguished German. A remark or two on the attractiveness of chemistry, and its irresistible influence over the human mind, shall close this long and desultory letter.*

Chemistry is perhaps the most *fascinating*, and certainly the most *delusive* and positively *hallucinative* of all existing branches of science. It plunges its votaries, I mean, into more numerous, deeper, and more irretrievable errors and blunders, than any other sort of knowledge—or rather than any other sort of pursuit—for real knowledge can, in no event, be the parent of error. Nor is this all that may be correctly said of chemistry. Since its commencement in *alchemy*, a thousand years ago (for such *was* its commencement), it has produced, among its ardent and enthusiastic cultivators, a greater amount of *scientific monomania* than all other forms of study.

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* Part of this article was transmitted in the form of a letter.—*Editor.*

The whole tenor of their lives, and the entire manifestations of their actions and writings proved, that all notorious alchemists were scientific monomaniacs. Their pretensions to a knowledge of the dark and inscrutable secrets of nature, united to their sleepless and exhausting researches after the philosopher's stone, the panacea or universal remedy, and the alkahest or universal solvent, with other objects of investigation equally visionary and beyond the reach of human means, afford, in my opinion, proof conclusive of the truth of this charge. Nothing short of a form of madness could have urged them, for a life-time, to the *phantom-chase* in which they consumed their days and nights, and wasted their fortunes, and by means of which they lived in withering toil and penury, and died in want.

Nor are some of the freaks of fancy of modern chemistry, *the unrestrainable child*, less lawless and extravagant than those of *alchemy, the venerable but bewildered parent*.

Toward the close of last century, a member of the Royal Society of London (a high-toned chemist of the time) submitted to the consideration of that learned body a paper, the object of which was, to prove that HUMAN THOUGHT is a *chemical emanation* from the *human brain*.

The production having been read, a motion, *apparently serious*, but *really ironical*, was made, directing that it should be referred to the committee of publication. The vote being called for, but one member replied affirmatively, and he was the luckless author of the communication. Deeply offended by an issue so unexpected, the gentleman unceremoniously repossessed himself of his paper, and, sternly declaring that it should never be offered to the society again until the opening of a "new and brighter era," when the members should be capable of appreciating its merit, he bore it indignantly from the hall of the institution. Whether the writings of the Professor of Giessen are regarded by his followers as the morning-star, the rising sun, or the full meridian of that "era" of glory, I am not informed.

Near forty years ago, a distinguished and well-known professor of chemistry declared, in my presence, in my own house, that by a chemical process *he could make a human being!*

About the same time, a book was published in Philadelphia, by a gentleman with whom I was intimate, in which it was openly asserted that the time would soon arrive when, by the arrangement of a given kind of matter, in a given way, and the passage through it of a stream of electricity, "*a man might be crystallized!*" But the period of *electrical* man-making has not yet reached us.

N. B. Hitherto it has not been in my power to make a thorough and satisfactory examination of Dr. Carpenter's "Principles of Human Physiology." It is my purpose, however, to do so as soon as may be convenient to me. Should I, therefore, in my perusal of the work, discover anything having a claim to further and special animadversion, the readers of the Journal will probably hear from me again on the subject.

ART. II.—*On the Relative Proportion of Centenarians, of Deaf and Dumb, of Blind, and of Insane, in the Races of European and African Origin, as shown by the Censuses of the United States.* By the EDITOR.

IN vol. I., p. 151 of this Journal, we had an article entitled "*Vital Statistics furnished by the Sixth Census of the United States, bearing upon the Question of the Unity of the Human Race.*" The object of this paper was to show the fallacy of an attempt made in two medical cotemporaries to prove, from the single fact that the census gives a much higher ratio of centenarians to our African than to our European race, that the two people constitute *distinct species*, and that their offspring, the mulatto, on the *assumed* ground of having a very short mean duration of life, is a *hybrid!* The subject of the relative number of deaf and dumb, blind, and insane, in the two races, as well as the relative ratios among the slaves and free colored, was also brought under notice. Now, as additional light has been thrown upon these subjects in the interim, the interest that they possess induces us to return to the inquiry. And first as respects the

*Deaf and Dumb, Blind, and Insane.*

In all civilized countries, the statistics of insanity have, in recent years, been an object of the highest interest, not only to physicians, to political economists, and philanthropists, but to men of general science; but all investigations heretofore conducted by individuals or associations, as medical societies, or committees of legislatures, have failed of their object. As it proved impracticable to operate thus with concerted action over any large district, or to determine, as the basis of calculation, the numbers of the people or of the particular class, among whom the insane were found, these investigations have always proved partial and incomplete. Under these circumstances, its inclusion among the objects of the United States census was hailed as the promise of the development of truth which had previously defied all researches; for here were presented two varieties of the human family, embracing seventeen millions of souls. In the census of 1830, the number of deaf and dumb, and blind, was alone computed; but the last decennial enumeration, which included the insane also, was anxiously waited for, confident that the field cultivated, the widest that has ever been thus surveyed, would yield the most abundant harvest. The marshals, each in his own district, were instructed to ascertain, in the enumeration of the white and colored inhabitants, the number of those "who are insane or idiots," both in the white and colored races. In the words of the act providing for the taking of the sixth census:

"The said enumeration shall further distinguish the number of those free white persons included in such enumeration, who are deaf and dumb, under the age of fourteen years; and those of the age of fourteen years and under twenty-five; and of the age of twenty-five and upward; and shall further distinguish the number of those free white persons included in such enumeration who are blind; and also in like manner of those who are insane or idiots, distinguishing further such of the insane and idiots as are a public charge.

"The said enumeration shall further distinguish the number of those free colored and other colored persons, included in the foregoing, who are deaf and dumb, without regard to age, and those who are insane and idiots, distinguishing further such of the insane and idiots as are a public charge."

In the census of 1830, the ratio of whites, deaf and dumb, was 1 in 1,964, and of the colored population, 1 in 3,134; and of blind, the ratio of the former was 1 in 2,651, and of the latter, 1 in 1,584. In this inverse result in the two races, the excess is about equal, the deaf and dumb whites being a little more than three to two, and the excess of colored blind being in about the same ratio.

According to the census of 1840,

| | |
|---|---|
| The ratio of the white deaf and dumb was | 1 in 2,123 |
| " colored " | 1 in 2,933 |
| The ratio of the white blind was | 1 in 2,821 |
| " colored " | 1 in 1,509 |
| The ratio of the white insane was | 1 in 977 |
| " colored " | 1 in 978 |

In both the decennial enumerations, the ratio of white deaf and dumb is the higher, and the same comparative result is afforded among the colored blind; but the ratio of white deaf and dumb has diminished slightly in the latter census, while that of the colored population has increased about equally; and as regards the blind, a similar ratio of white decrease and of colored increase, is shown. These results seem to admit of ready explanation on the ground of white immigration and colored emigration, since neither the blind nor the deaf and dumb, are often found moving from country to country.

Of these three terrible inflictions, it is remarked by Professor Tucker* that the one which is congenital is the more prevalent among the whites; while the higher ratio of blind among the colored population, may be reasonably referred to their severer labor and greater exposure, to their greater improvidence, and less advantage of medical aid.

The proportions of the insane and idiotic in the two races, it is seen above, are identical, the ratio being somewhat more than 1 in 1000; and as regards the patients of this description, *at public and at private charge*, both classes of the population seem to have the same proportion. Those at public charge in both are about twenty per cent. of the number at private charge.

As regards the diversities among the ratios of the white insane in the different States, they no doubt admit of explanation on the ground of emigration; for as insane persons, as stated above, rarely emigrate, their ratio should be lowest in those States, as New England, which lose by emigration, and *vice versâ* as in the Western States.

As respects the ratios of the colored insane, however, so extraordinary is the difference among the States, that the truth of the data themselves has been called in question. The development that among the colored population of the Northern States there is one lunatic for every 144·5 persons, while the ratio in the same class inhabiting the Southern States, is but 1 in 1558, was wholly unexpected. Besides, in some of the New England States, the ratio was extraordinarily high. In Maine, it was as high as 1 in 14·4; in New Hampshire 1 in 28·2; and in Massachusetts 1 in 43·3. Consequently, it has been announced to the world, that, according to the experience of the United States, in a population

* Progress of the United States in Population and Wealth in Fifty Years, as exhibited by the Decennial Census. By George Tucker, Professor of Moral Philosophy and Political Economy in the University of Virginia.

consisting of 83·1 per cent. of whites, 14·6 of slaves, and 2·3 of free colored, slavery, compared with freedom, is tenfold more favorable as respects its influence in the production of insanity. Indeed, this comparative exemption of the slave from insanity, contrasted with the tenfold liability of the free black, has been seized upon by journals devoted to the peculiar institutions of the Southern States, as a powerful argument. In the Southern Literary Messenger, the consolation is held out to the slaves that, notwithstanding governed by another man's will, their minds, unlike their self-governing brethren, are free from the desolating visitation of insanity.

It has been, however, shown by an inquiry extended through the free states generally, that colored insane are frequently reported from towns which are wholly destitute of that class of inhabitants. Mr. Jarvis* has traced this fact to more than 150 towns in twelve of the free States and one territory. Besides, he alleges that in many towns the whole colored population are registered as insane, while in others, two-thirds, one-half, or one-fourth, are reported to be thus afflicted. He shows that in Worcester, Massachusetts, in which town, according to the census, there are 133 colored lunatics and idiots, supported at public charge, the white patients in the State Hospital have, by some unfortunate mistake, been substituted; and that, by this single mistake, the colored lunatics of Massachusetts have been multiplied three-fold; and that, were this error corrected, the proportion of colored insane belonging to the State, would be reduced from 1 in 43 to 1 in 129.

Mr. Jarvis further shows that there is reason to believe that similar errors respecting the insanity of the colored, also vitiate the results of the insanity of the whites. He shows a disagreement between the census and the report of the Secretary of Massachusetts; for, while the former shows but 627 lunatics and idiots, "of all colors," supported at the public cost, the latter gives 887 pauper lunatics and idiots. So in reference to the State of New York, the superintendents report 1058 pauper lunatics, while the census marshals register but 739. And in Connecticut, the number of lunatics and idiots, as determined by the State Medical Society several years ago, he says, was more than twice as large as that reported by the last census. As regards the blind, and the deaf and dumb, he alleges that the census is equally inaccurate among the negroes of the Northern States.

In the Report of the Trustees of the Maine Insane Hospital (Nov. 30, 1843), to the Governor and Council of that State, we have similar evidence of the incorrectness of the last Census, which returns 94 colored insane, being 1 to 14 of the whole colored population. Now according to this Report, "it appears that fifty-six of them are returned from the following towns, not one of which, according to the census itself, contains a single colored inhabitant;—Newfield, 5; Danville, 1; Otisfield, 2; Scarborough, 6; Limerick, 4; Dixfield, 5; Gilead, 1; Hebron, 1; Norway, 6; Peru, 3; Edgecomb, 1; Jefferson, 1; Webster, 2; Industry, 3; Bradley, 1; Dexter, 1; Swanville, 1; Unity, 1; Hartland, 2; Madison, 1; New Portland, 1; Ripley, 1; St. Albans, 3; Alexander, 1; Baring,

* Vide American Journal of the Medical Sciences for January, 1844. *Article—Insanity among the Colored Population of the Free States.* By Edward Jarvis of Dorchester, Mass.

1; Calais, 1. Seventeen are returned from the following towns, in only one of which does the number of colored people equal that of the colored lunatics:—Limington, 2; Biddeford, 2; Dresden, 6; Leeds, 1; Monmouth, 1; Dixmont, 1; Hope, 2; Fairfield, 2. The remaining twenty-one are returned from the following towns, whose aggregate colored population, is only 197:—Nobleborough, 4; Topsham, 2; Warren, 3; Wiscasset, 1; China, 1; Gardiner, 1; Hallowell, 2; Readfield, 1; Waterville, 1; Oldtown, 1; Bucksport, 3; Houlton, 1."

Whether these errors originated with the thousand marshals instructed, each in his own district, to inquire from house to house relative to the requirements of the sixth enumeration, or whether they are due to the carelessness of the clerks by whom they were "*corrected at the Department of State*," it is not given us to determine; but one fact is sufficiently obvious, which is, that, taking the whole Union, the results afforded by the data, at the last two censuses, upon the blind, and the deaf and dumb, and also the results as regards the insane and idiots, which are limited to the last enumeration, confirm one another. As it is only on the basis of the data given by large numbers, thus allowing errors to compensate one another, that the doctrine of averages can claim our attention, it follows that such a limited number of colored insane, as 19 in New Hampshire, 13 in Vermont, 13 in Rhode Island, 44 in Connecticut, 73 in New Jersey, and 28 in Delaware, cannot, by any means, justify any conclusion. This is statistics on a small scale, which is equivalent only to the merest chance; for in so limited a number of cases, it is just as easy to fall upon singularities as upon facts approximating an average character. It is only when the peculiarities and coincidences among a myriad of facts, as has been said on a previous occasion, have been reduced to their average proportion by the opposite peculiarities and coincidences of another myriad of facts, that the application of numbers to the elucidation of the natural history of man in health and disease, is allowable; and then it constitutes in reality the mathematics of medical science.

Thus much it has been deemed necessary to say in vindication of the general correctness of our six censuses; and, admitting to the fullest extent the errors pointed out by Mr. Jarvis, it does not follow that the higher ratio of the colored insane in New England may not be referred to causes unconnected with freedom and slavery. For instance, as the insane very rarely migrate, and as the free male negroes have a kind of migratory passion, it is no ways surprising if we find, in some towns, having but two or three colored persons, all insane; and again, as the whole constitution of the black is adapted to a tropical region, the difference of the prevalence of insanity may be ascribed to the agency of our austere climate, with even greater propriety than to the condition of freedom. Should the enumeration of 1850 require a discrimination between the free and the slave in the Southern States, as regards the insane and idiots, we shall have better data, in view of the sameness of surrounding circumstances, for the determination of this interesting and important question.

In appearing as the advocate of the general correctness of our censuses, it would seem necessary to say in explanation, that we have for months past been engaged in investigations which have required a critical examination of all the censuses from 1790 to 1840; and we are happy in being able to aver that they afford confirmation of one another in a thou-

sand different ways. These researches have likewise enlightened us further upon the subject of the

*Relative Proportion of Centenarians in the two Races.*

The absurdity of the deduction which maintains, that the two races constitute distinct species and that their offspring is a hybrid, was perhaps sufficiently exposed in the article referred to at the beginning of this paper; but, as the argument there made was based chiefly upon the great laws of the natural history of man, which prove the unity of the human family, it will be well to give some additional facts, based more particularly on the observation of vital statistics.*

It is an undisputed fact, as proved by the censuses, that the colored race, by virtue of some peculiar tenacity of life, far outnumbers the whites in centenarians. A comparison of the whites and the colored race, at the age of 100 and upward, in the census of 1830, shows that the chances of attaining this great longevity are forty times as great with the free colored as the whites, and with the slaves, eleven times as great; and in 1840, the disproportion, though somewhat diminished, shows nine slaves and thirty free colored centenarians to one white one.

The centenarians of each sex, in each of the three classes, are exhibited in the following table:

| | WHITES. | | FREE COLORED. | | SLAVES. | |
|---|---|---|---|---|---|---|
| | Males. | Females. | Males. | Females. | Males. | Females. |
| 1830 ..... | 301 + 238 = 539 | ..... | 269 + 386 = 655 | ..... | 748 + 676 = 1424 | |
| 1840 ..... | 476 + 315 = 791 | ..... | 286 + 361 = 647 | ..... | 753 + 580 = 1333 | |

In the census of 1830, the white centenarians are equal to 1 in 19,529, the free colored 1 in 487, and the slave 1 in 1410; and in the last census these ratios stand respectively, 1 in 17,938, 1 in 597, and 1 in 1866.

But it was before remarked, in Vol. I., that the representations of aged blacks, relative to the period of their birth, must be received with many grains of allowance; for the two reasons, that, in the first place, they have no family registers, and, in the second, that among the slaves past middle life, there is a prevailing disposition to exaggerate the real age, from the circumstance that it, at the same time, flatters self-love, and furnishes both a claim to charity and kindness, and an excuse for a relaxation of labor.

Now it is our design to show that this mere tenacity of life is so unimportant in the estimate of the mean duration of man's life, that it has been vastly magnified by our modern philosophers, who make it even the groundwork of a distinct species. Dr. Southwood Smith, for example, has adopted a division of life into the epochs of infancy, childhood, boyhood, adolescence, manhood, and old age; all these periods being distinguished from one another by external characters, which are but the signs of different internal physiological conditions. All these epochs of man's

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* The writers here referred to are—

*Vital Statistics of Negroes and Mulattoes.* By PHILANTHROPIST. *Boston Medical and Surgical Journal,* for October 12th, 1842.

*The Mulatto a Hybrid—probable Extermination of the two Races, if the Whites and Blacks are allowed to Intermarry.* By J. C. NOTT, M.D., Mobile. *American Journal of Medical Sciences,* for July, 1843.

life differ physiologically as much in physical strength as in mental power. Regarding infancy as terminated at three years of age, a decade of years, he says, brings childhood to a close; and this age of 13 years, mortality having steadily decreased during the intervening period, is the maximum of viability. The period of adolescence is next brought to a close by another decade, during which the mortality as steadily advances to its maximum. A third decade sees the adolescent changed into the perfect man, the mortality again diminishing; and now, during another decade and a half, there is a slow rise of mortality. Thus we find a term of 23 years, between the period of birth and that of adult age; and between this last epoch and the period when life just begins to decline from its meridian, another term of 24 years. These epochs, which are based upon the celebrated tables presented to Parliament by John Finlaison, Esq., the Actuary of the National Debt Office, would seem to have their foundation in nature; for it is during these intervals that certain physiological changes occur, upon which the characteristics of these epochs depend. Now, according to Dr. Smith, it is only the interval between the adult age and that of decrepitude which is capable of being extended; and when this extension of human life does occur, he avers that it cannot be due to a protraction either of the period which precedes or of that which succeeds the age of mature manhood.

Without attempting to illustrate this position any further, we will proceed to show its application to the white and colored races in the United States. According to the census of the United States, as shown by us in our previous article, and since then by the calculations of Professor Tucker, before referred to, the proportion of the whites remaining alive at 55 years of age is somewhat greater than that of the colored race; and as the whites have consequently a more extended period of mature manhood, the greater number of the colored race at the age of 100 is attributable to a mere tenacity of life, which seems unsusceptible of explanation. This general fact is referred to in the Report on the Sanitary Condition of the Laboring Population of Great Britain, as follows:

"Some constitutions are found to resist vaccine matter. Here and there, constitutions appear which resist all the noxious influences by which they are surrounded, and attain extreme old age. Not unfrequently we find the existence of these solitary individuals referred to as proofs of the general salubrity of the very circumstances under which generations have fallen and been buried around them. It is a singular fact, as yet unexplained, that the greatest proportion of centenarians are of the laboring classes; and that instances of them have from time to time appeared amidst the crowded populations in some of the worst neighborhoods of London, where the average duration of life is the lowest. It is remarked by M. Mallet, that in Geneva extreme old age has not participated in the prolongation of life which has taken place in the less advanced ages. In the periods of from 60 to 70 years of age, the amelioration is inconsiderable; after 70 years, there is no perceptible improvement; after 80 years, the aged have, indeed, a little less probability of life at the present time than they had in the 16th century. Centenarians, who were not rare in the 16th and 17th centuries, now disappear; during the last 27 years, Geneva has not produced a single one."

But to comprehend, in its fullest extent, this unexpected result, it is necessary to give a general view of the vital statistics of Geneva for the last three centuries. This is furnished in the *Annales d'Hygiène, Tome* xvii., in a most valuable paper of 168 pages, entitled, "*Récherches His-*

*toriques et Statistiques sur la Population de Genève, son Mouvement annuel et sa Longévité, depuis le* XVI^e^ *siècle jusqu'à nos jours* (1549–1833). *Par* EDOUARD MALLET, *Docteur en droit, membre, etc.*" It must suffice, however, to give general results only so far as will serve to illustrate the relations in which centenarians stand relative to the other laws of population and mortality. The *probable* and the *mean* durations of life in that city have increased in the following ratios:

| PERIODS. | PROBABLE LIFE. | | | | MEAN DURATION OF LIFE. | | | |
|---|---|---|---|---|---|---|---|---|
| | Years. | Months. | Days. | Propor. | Years. | Months. | Days. | Propor. |
| 1560—1600 | 8 | 7 | 26 | 100 | 21 | 2 | 20 | 100 |
| 1600—1700 | 13 | 3 | 16 | 153 | 25 | 8 | 2 | 120 |
| 1700—1750 | 27 | 9 | 13 | 321 | 32 | 7 | 22 | 153 |
| 1750—1800 | 31 | 3 | 5 | 361 | 34 | 6 | 11 | 162 |
| 1800—1813 | 40 | 8 | 0 | 470 | 38 | 6 | 0 | 181 |
| 1814—1833 | 45 | 0 | 29 | 521 | 40 | 8 | 7 | 191 |

It is thus seen that the probability of life to every individual born, was, in less than three centuries, doubled more than five times;* and yet, directly in the face of this extraordinary fact, we have the equally extraordinary result, that with the *prolongation of the mean term of life, the number of centenarians have gradually diminished*, as has been shown in the extract just made. But we will give the result in Dr. Mallet's own words:

"Cependant la vieillesse n'a point participé à la prolongation de vie qui a eu lieu dans les âges moins avancés. De 60 à 70 ans l'amelioration est très faible: à 70 ans elle est nulle. Depuis 80 ans, le vieillard a un peu moins de probabilité de vie dans l'époque actuelle qu'il n'en avait au XVI^e^ siècle. *Les centenaires, qui n'étaient pas rares aux* XVI^e^ *et* XVII^e^ *siècles, disparaissent maintenant: depuis 27 ans Genève n'en a pas produit un seul. Loin de marcher vers une carrière patriarcale, la vieillesse a reculé et perdu du terrain.*"

* As the probable life might be readily confounded with its mean duration by those who have given little attention to vital statistics, both have been included in the above table. While the mean duration of life indicates the average age at death of a certain class or community included in the average, the probable duration differs wholly from this. The probable life at birth, for example, is in general 25 years; that is, at the age of 25, the number of children born at the same time will have been reduced to a moiety. Now, if we fix on any age, and observe at what age this number decreases to one-half, we have the *probable* term of life, because, as one-half have died, the probability of being alive is equal to the probability of being dead. If we find, for instance, that 1000 individuals are living at the age of 40, and that of these, at the age of 63, only 500 remain, the inference is, that at 40, the probable life, according to that table, is 23 years; or, as writers on annuities and reversions express it, it is an even wager whether he will be alive or dead at that period.

As an example of the gross errors to be found in our most prominent American writers on hygiène as connected with vital statistics, it will suffice to refer to the pervading one, that the mean duration of life has doubled in London within the last century. This deduction is based upon the fact, that a century ago the mortality in London was 1 in 20, while at this time it is only 1 in 40; but here the error consists in regarding the proportions of deaths as exponents of the average ages of deaths. Instead, however, of a duplication of the mean duration of life within a century, it is shown from a calculation based on the average ages themselves, that it has increased only about one-fifth; that is, from 25 years and 1 month, to 29 years and 10 months.

Thus far, adds Dr. Mallet, we have seen no population rich in centenarians, save those in which the mean duration of life is short.

This same work, *Annal. d'Hyg., Tome* XV., contains a contribution by Sir Francis D'Ivernois, entitled, "*Sur les Centenaires et sur le Conséquences a tirer de leur Nombre plus ou moins grand.*" This writer expresses not a little surprise that, according to the census of 1830, there should be 539 white centenarians in a population of 10,526,248; but, had he given his attention to the colored centenarians, and had he at the same time made a proper calculation of their ratio, the surprise of Sir Francis would surely have known no bounds. Regarding us as one of the old stationary populations of Europe, he forgot (as it is found necessary in contrasting the chances of longevity in two countries, to make allowance for difference of natural increase), to take into consideration the fact that our population has doubled every 25 years since our earliest colonization—a result which is proved by the censuses since 1790, and by other data prior to that time. Hence, instead of comparing the centenarians of a particular census with the total population of the same, it is necessary to make the comparison with the total population at the period when they were born. Or, to make the proposition more practicable, to ascertain the chances of attaining the age of 50, in 1840, it is requisite to compare the number of this class with the total population of 1790. Thus we find the following relative ratios:

| | | | | | |
|---|---|---|---|---|---|
| In 1830, the white centenarians were— | | Males, | 301 | | |
| | | Females, | 238 | | |
| | | | | 539, equal to 1 in | 19,529. |
| " | Free colored " | Males, | 269 | | |
| | | Females, | 386 | | |
| | | | | 655, equal to 1 in | 487. |
| " | Slave " | Males, | 748 | | |
| | | Females, | 676 | | |
| | | | | 1424, equal to 1 in | 1,410. |
| In 1840, the white centenarians were— | | Males, | 476 | | |
| | | Females, | 315 | | |
| | | | | 791, equal to 1 in | 17,939. |
| " | Free colored " | Males, | 286 | | |
| | | Females, | 361 | | |
| | | | | 647, equal to 1 in | 597. |
| " | Slave " | Males, | 753 | | |
| | | Females, | 580 | | |
| | | | | 1333, equal to 1 in | 1,866. |

Now, this may answer as a relative, but not as an absolute, comparison. The whole colored population, which in 1840 numbered 2,873,458, consisted in 1790 of but 698,682; and if we reduce it in the same proportion for fifty years more, when the centenarians of 1840 were born, and then divide the total colored population of 1740 with the total centenarians of 1840, it will be seen that about 1 in every 85 colored individuals born became a centenarian!!

Now, had Sir Francis D'Ivernois made this proper calculation, he would have had still more cause to be merry at our expense, at the idea of so many old persons hanging over the tomb, without being able to tumble into it, as well as at the reputed high ratio of centenarians in Russia. From a consideration of the laws above developed at Geneva, but more especially from his observation at Montreaux, where during the memory of man there has been no instance of a centenarian, and from

1754 to 1830 but 28 nonagenarians, two of whom reached the age of 96 years, Sir Francis arrives at the conclusion, that an *unusual number of centenarians, so far from being an indication of the vitality of the masses, is rather a proof to the contrary.* Yet we find that every country which has a high ratio of centenarians, as Russia, for example, ignorantly makes it the subject of its own glorification, in the way of an irrefragable proof of health and general longevity!

This subject was, indeed, taken up as long ago as 1797, and discussed in the *Bibliothèque Britannique de Genève,* by Dr. Odier. In comparing the mortuary registers of Philadelphia and Geneva, he discovered that three-fourths of the individuals born in the former city were already dead at the age of 43, which he declared is seven years sooner than it occurred in Europe; but he became aware, at the same time, that of those Philadelphians who passed this point, a great number reached a very advanced age. Hence he drew the conclusion: "Le grand nombre de centenaires ne prouve pas qu'on jouisse d'une plus grande probabilité de vie. AU CONTRAIRE." A high ratio of centenarians does not imply an equally great probability of life; *but the contrary.*

By Mr. Rickman of England it is likewise asserted that "*the proportion of existing centenarians is no valid indication of national health or longevity.*"

The celebrated calculator, John Finlayson, Esq., says that "when in statistical statements we see many instances set down of old people passing their 100th year, and some dying at much more advanced periods, there is reason to suspect very great error from the well-known propensity of octogenarians, and the impatience of their relatives to exaggerate their age, and to persist in the same story, until by the decay of their faculties they believe it themselves."

As it is now, so was it also in the days of David, the sacred poet and the prophet king. "The days of our years are threescore years and ten; and if by reason of strength, they be fourscore years, yet is their strength labor and sorrow; *for it is soon cut off, and we fly away.*"

Among the Greeks and Romans, history gives us many examples of great longevity; but these, too, are mere isolated cases, which have no direct relation with the mean duration of life, but appear to be such as are frequently found in the most insalubrious localities, and in periods of man's history when population is in its worst state.

By Pliny the younger, it is said that the country lying between the Appenines and the Po, contained, according to the census taken under the reign of Vespasian, 124 male centenarians; but as he gives no account of the population, nor of the deaths, nor whether slaves or females were included in the enumeration, he has given us information without much knowledge. It is a curious fact that Lucian devoted a treatise to the subject of the enumeration of distinguished individuals of antiquity, who attained the age of 80—100 years; and these, which are divided into the three great classes of kings and generals, the Greek philosophers, and lastly the historians, poets, and other writers, present those great names which are familiar to the classic scholar. But these data also stand isolated.

Hence, in view of the preceding facts and argument, we see why it is that, in comparing the sanitory condition of different nations, the knowledge alone of the absolute mortality or morbility will not suffice. Experience proves that, although these may be the same in two nations, yet

the effect on the national strength and resources will depend on the relative ratios in the periods of childhood, manhood, and old age. As the first and the last classes are mere consumers, while the second alone consists of producers, we see of what little importance children and centenarians are, in estimating the national strength.

We will lastly allude to the extraordinary fact, as noticed by all writers on centenarians, that they are generally, if not universally, found in that class of society which gives the lowest mean duration of life. M. Corbeaux, who made researches upon the English and Scotch centenarians, says—"*The recorded instances of unusual longevity are, almost without exception, confined to old soldiers who have escaped the worst chances of war, and to peasants whose circumstances placed them but a single degree above want of the common necessaries.*" In all Belgium, on the first of January, 1831, there were but sixteen centenarians, all of whom, according to Quetelet and Smets, belonged to the same class of the population, *y vivaient dans des conditions tr's médiocres.*

This then is another powerful argument showing that a high ratio of centenarians has no relation with the general longevity of a people. This is well illustrated in the deaths in Liverpool, for 1840:

| No. of Deaths. | | Average age of Deceased. |
|---|---|---|
| 137 | Gentry and professional persons, &c. . . . | 35 years. |
| 1,738 | Tradesmen and their families, . . . . | 22 " |
| 5,597 | Laborers, mechanics, and servants, &c. . . | 15 " |

The time-honored opinion that poverty is conducive to longevity—that the rich are less favored by the blessings of health than the poor—finds no confirmation in statistical investigations. That the hardy and contented poor man is exempt from the diseases of the wealthy and luxurious, is but a poetic fiction. Irresistible evidence of this truth is contained in every document, by which the rate of mortality among large numbers can be correctly ascertained. Hence, taking the whole population of a country, wealth may be assumed as a true measure of happiness, and consequently of health; and indigence as the measure of unhappiness, and consequently of disease. This comparison, according to M. Villermé, often shows a ratio of mortality, in the latter, twice as high; and taking the entire French population, the same comparison exhibits a duration of life among the poor, twelve years and a half shorter. Consequently, while the probability of life at birth, in the one case, is but thirty years, in the other class, it is extended to forty-two.

Thus it is seen that centenarians do not belong to that class, which has the longest average age of life.

This is a subject that would admit of much more extension, did our limits allow. Reference may be here made to the supposition of Professor Tucker and others, that a large proportion of the colored centenarians may have received through an African birth, constitutions more favorable to longevity than the average of the American-born slaves, who occupy, as regards the mass, the least salubrious portion of the Union. It is also thought possible by Professor T., that an undue proportion of the colored centenarians may be of the mixed breed, who, it is further supposed, may, on this account, be more tenacious of life than either ancestral race. As regards the respective mortality and longevity of the two classes of colored population, there is a marked difference in favor of the free colored division. By the census of 1820, the proportional

numbers of the two classes, at the ages under 45, present little variation; but beyond that age, the centesimal proportion of the free colored is 15·6 per cent., while that of the slaves is but 9·6. By the last two decennial enumerations, we find the same equality up to 36; but subsequently to this age, the centesimal proportion of the free colored augments in an increasing ratio. At these two censuses, the proportions at the age of 36 and upward were as follows:

| | FREE COLORED. | | SLAVES. | |
|---|---|---|---|---|
| | Males. | Females. | Males. | Females. |
| 1830 | 22·19 | 22·95 | 15·91 | 15·46 |
| 1840 | 22·55 | 23 26 | 15·83 | 15·27 |

Attention may here be called to the harmony of these results, which speak loudly in favor of the exactness of our censuses. To assign satisfactory causes for this difference in the two classes, were no easy matter. As a much larger proportion of the free than of the slaves, in the opinion of Professor Tucker, have been crossed in blood with the whites, he thinks that this *mixed* breed may, on this account, possess certain advantages of temperament conducive to longevity. This opinion is here introduced merely as a funny contrast to that which maintains that the Caucasian and the Negro races are proved by this difference of longevity to be distinct species, and that the offspring of the two, *in consequence of the shortness of his life*, but who, according to Professor Tucker, exhibits this *peculiar tenacity of life in the highest degree*, is a hybrid!

It is thus seen from the preceding researches, as regards centenarians, that they are most apt to be found in the worst periods of man's history, as respects the condition of population, and often too in the most insalubrious localities; that they abound in countries having a low mean duration of life, as in Geneva, in the sixteenth century, and that they decrease and finally disappear in proportion as the mean term of man's existence is extended by the improvement of his physical condition; and lastly, that they are always found in that class of society, which has the lowest mean duration of life. Hence it follows conclusively that a high proportion of centenarians does not depend upon a protracted mean duration of life in a community, nor is a great proportion of them to be regarded as an indication of national health or general longevity.

It is thus satisfactorily shown that of all attempts hitherto made by a certain class of philosophers to establish a distinction of species between the Caucasian and African, the present one, based upon the ratio of centenarians, is truly the most absurd. It also teaches the moral that he, who would strike a blow at one of the great principles of civilisation, not to say of the Christian religion, should first, at least through self-respect, make himself acquainted with what is known upon the subject.

Despite the barriers of demarcation between man and man, which pride and ignorance have ever, and will ever, continue to set up, all investigation into man's organization and his natural history, will continue still further to confirm the conclusion, that the entire human race have been made upon one model. If the doctrine of the unity of the human family requires one column more to sustain the noble superstructure, then will the censuses of the United States, which demonstrate a similarity of vital laws in the two races, as regards the various phenomena connected with natural increase, complete the triumph.

ART. III.—*On the Treatment of Fractures of the Clavicle.* By ABM. L. COX, M. D., of New York.

THE difficulty of obtaining a perfect control of this fracture, by the different bandages now in use, is very generally admitted by practical surgeons. This, however, is no less certain, than that the great principles on which such control is attempted, are well ascertained and universally admitted. The action of the sterno-mastoid and great pectoral muscles, holds the sternal fragment in its proper position, while the scapular portion falls with the weight of the arm or by the action of the muscles, and is then drawn inwardly, so that the inner portion overrides the outer, and the position of the shoulder is altered from its natural state, to one more inward, downward, and forward.

The indications of treatment are, therefore, obviously to extend, elevate, and hold back the shoulder. For this purpose, surgeons formerly resorted to a figure-of-eight bandage, applied over the back between the shoulders—a plan of treatment liable to the objection, that it does not meet all the proper indications of the case, and does not insure a perfect restoration of the functions and configuration of the fractured shoulder.

Dessault's bandages have also been generally used, and are designed with reference to the great and acknowledged principles of the case; but it is very generally admitted that these bandages are not as successfully used as is desirable, and many surgeons have consequently returned to the old figure-of-eight bandage in preference to them. Even our schools, if I am correctly informed, teach their abandonment; a fact to be regretted, as they certainly have several decided advantages over the more simple means now generally superseding them.

Of these, the first is the advantage of a direct and perfect extension of the fractured bone, effected by the cushion in the axilla, and the transverse turns of the roller over the arm of the fractured side, round the body, and under the armpit of the sound side. This important point of proper extension is well attained and kept by this part of Dessault's management.

The great defect, which, as far as I have been able to learn, is pretty generally admitted against the bandages in question, exists in the last bandage, the object of which is to retain the fractured shoulder in a sufficiently elevated posture.

Dessault's direction for its application is, to commence with a roller nine yards long, at the axilla of the sound side, to bring it in front of the chest over the shoulder of the fractured side, down behind the arm to the elbow, then to bring it in front of the chest to the point of beginning, then over the back from the axilla to the fractured shoulder, crossing it to the front of the arm, under the elbow, and so obliquely over the back again to the axilla of the sound side, and in this way till the roller is applied.

That this plan should fail in keeping the fractured shoulder and arm in a proper elevation, is, I think, obvious *à priori*, and unfortunately it is found to be so in practice.

The axilla is below the shoulder of the opposite side, and the bandage, therefore, exerts a direct influence to depress it just in proportion to the strictness of its application. If, indeed, the turns which are made under the elbow of the affected side could be brought over the shoulder of the sound side, thus making the sound shoulder a *point d'appui* from which to suspend the elbow and arm of the fractured side, there would be some

influence exerted toward the end in view. But when we reflect that this turn would support the elbow only by an oblique application, and that the bandage, from its yielding to the weight of the arm, could afford little or no support, thus applied, it needs but a moment's reflection to perceive that the end which the surgeon has in view is completely lost by passing the turns of the roller *under the axilla* of the unaffected side.

What has been said will, I trust, serve to prepare the reader for the suggestion which it is the object of this paper to make in the modification of Dessault's bandage.

Instead of making the axilla of the sound side the point of support of the shoulder of the fractured side, I propose that this point of support be sought close to the neck, on the side of the fracture. The roller may start from the sound axilla, pass over the other shoulder, down behind the arm and under the elbow, then upward over the fracture, obliquely across the back, and under the axilla of the sound side; thus making a figure-of-eight, by which the elbow will be drawn directly upward, and the point at which the bandage crosses on the shoulder being properly secured by pins, will be retained permanently close to the neck by means of the turns which pass under the sound axilla. This arrangement seems to possess all the properties at which the last bandage of Dessault is aimed, and of which it undoubtedly fails.

But one case has occurred to me whereby I could test the soundness of my reasoning by an appeal to practical results. This happened in an elderly woman, who fell from a chair in attempting to wind the kitchen clock. Dessault's plan failed, after careful and patient repetition; so also did the old figure-of-eight bandage, and several other modifications of them which successively suggested themselves to my mind in the management of her case.

I made the application, which I have attempted to describe above, with the best results. It retains the shoulder in its proper position, and the bones in perfect coaptation, and is at the same time comfortable to the patient.

It is well to commence by preparing the arm of the affected side with a roller, carefully and accurately applied. This precaution has the double advantage of guarding the arm from the pressure of the turns of the first roller, and also of furnishing the means of fastening the last application to the elbow by means of pins.

If it shall be thought worthy of trial by the profession generally, I believe it will be found to be an improvement; and I therefore feel it to be a duty to make the suggestion, and submit it to the judgment of my medical brethren. No one can be more aware than myself of the very simple nature of the alteration in Dessault's bandage, that I have ventured to propose; but if it should be found on trial to be better adapted to attain the very ends, and to apply the very principles of practice, which Dessault taught, it will doubtless be justly appreciated by the profession.

ART. IV.—*Extracts from the Recorded Proceedings of the New York Medical and Surgical Society.*

THIS society has now been in existence some ten years. Formerly their proceedings met the public eye; but, within the last two or three years, nothing has been published under its auspices. Such societies have two objects in view, the one is the prosecution of medical science, and the other, the promotion of social communion; and both these purposes are highly worthy of commendation.

The following extracts from the secretary's records, extend over perhaps the last six months; and they are here inserted without reference to the particular times of meeting.

*Case of Melanotic Tumor occupying the left Labium Pudendi.* By Horace Green, M. D.—Respecting this case, Dr. G. gave the following details:

The lady, Mrs. H. C., whose case is here appended, is 32 years of age; of a strumous diathesis, and of an exceedingly nervous temperament. For several years, in earlier life, she had suffered from swellings of the absorbent glands of the neck, and other characteristic symptoms of scrofula. She had also endured much from neuralgic pains, which, occupying different parts of the body, had proved extremely obstinate and severe.

These affections, however, had disappeared under appropriate treatment, and, for several years past, her general health had been greatly improved. Eight years ago, soon after the birth of her first and only child, she discovered a small tumor, occupying the left labium pudendi. At first, it occasioned but little uneasiness, and for one or two years succeeding its discovery, it was supposed to remain nearly stationary. After this period, however, its further development became manifest, and this increased size was attended with the most distressing neuralgic pains; coming on at irregular periods, and occupying, not only the labium, where the tumor was seated, but extending down the whole length of the limb, on the affected side. Still, from the delicate nature of her complaint, and from the fear of an operation, she was prevented from making known her condition in regard to the tumor, to any physician. During the past year, however, the above symptoms had greatly increased, and the limb, moreover, of the affected side, became partially paralyzed, so as to render walking difficult, and, at times, impossible. This increased severity of the symptoms, together with the mental anxiety of the patient, began to affect, seriously, her general health, and she was induced to submit her case for examination.

At the request of her husband, Dr. Green visited her the 9th of August, 1843, and, on making the necessary examination, he ascertained the position and extent of the tumor. It was of an oval form, occupying the whole of the labium, and extending, in its longest diameter, from the ramus of the pubes, downward and backward to the tuberosity of the ischium; and projecting, laterally, in such a manner, as to carry the opening of the vagina nearly an inch to the right of the median line. The tumor was hard and unyielding to pressure; so much so that Dr. G.'s first impression was, that it was of a bony character; but, on passing the first and second fingers into the vagina, and making the attempt to draw the tumor outward, the points of the fingers could be insinuated between it and the

rami of the pubes and ischium; and its disconnection with these bones was thus established. Under these circumstances, the propriety and practicability of removing the tumor by an operation, was evident; and Dr. G. so stated the case to the patient and her friends.

They were prepared for, and acquiesced in, this decision, but requested, on account of some family arrangements, that the operation might be delayed a few weeks.

Assisted by his friend, Dr. A. L. Cox (who, on seeing the case, confirmed Dr. G.'s opinion as to the propriety of removing the tumor), he performed the operation on the 16th of September.

The patient was placed upon the table, as in the operation for lithotomy, with the limbs separated and flexed upon the body. By introducing the two forefingers into the vagina, Dr. C. was enabled to retain the tumor in a firm position, while Dr. G. made an incision, parallel with the edge, and over the whole extent of the labium. On proceeding with the operation, several superficial branches of the pudic artery were divided, which required ligatures to be placed upon them. The whole of the tumor was then carefully dissected out; and, after the bleeding had subsided, the parts were brought together, and the edges of the wound retained by a suitable number of stitches.

The operation, although not unusually tedious, was extremely painful; yet it was borne by the patient with a great degree of firmness and resolution.

On examining the tumor, it was found to be encysted, and evidently of the melanotic species. Its contents were an inorganized mass, of a dark brown, or a dull bistre color, and resembling very much, as secretions of a melanotic character are said to do by writers on this subject, the pigment of the choroid.

For a day or two after the operation, it became necessary to remove the patient's water with the catheter. After this period, no unfavorable event occurred. The parts healed kindly; the natural action returned to the limb, and, in a few weeks from the operation, the patient was able to walk from her door to her carriage with the aid of an attendant's arm.

The distressing neuralgic pains have not returned since the tumor was removed.

*Case of Neuralgia of the Lower Jaw, relieved by a Surgical Operation.* By Horace Green, M. D.—The following case, said Dr. G., is interesting, inasmuch as it establishes the fact that mechanical irritation may excite periodical neuralgia, which will resist the ordinary remedies so long as the local irritant remains.

In May, 1837, Dr. G. had placed under his care, Miss G. R., aged 12 years, of New Jersey, whose father had brought her to this city for medical advice. She was suffering, at the time, from a neuralgic affection of the lower jaw; it was intense in its character, beyond anything of the kind Dr. G. had ever seen. The paroxysms occurred several times in the twenty-four hours, and were of such severity as to render her, while they continued, frantic from pain. From a full, robust girl, she was reduced to a mere skeleton, and her general health was greatly impaired.

The history of her case, as Dr. G. learned it from her parents, was as follows:

Four months previous to the above period, when in good health, she had had extracted the second molar tooth of the lower jaw. The cavity

closed, and the gum healed up as usual; but two weeks after the tooth was removed, she had an attack of severe neuralgic pain, which was referred to the spot whence the tooth had been extracted. It passed off, however, but returned the next day, at the same hour, with increased severity; and, for two or three weeks, each morning, the pain recurred, at nine o'clock, and continued from one to two hours with the utmost severity. After this period the paroxysms increased in frequency—returning several times in the twenty-four hours, and each time being attended with an equal amount of suffering. Soon after the commencement of the complaint, the family physician was called in, and the ordinary remedies, in such cases, employed, but without, in any degree, affording relief. Subsequently other physicians were called in consultation; and, during the three months preceding her visit to the city, the young lady had undergone every form of treatment employed in these affections; but no method that could be devised, had been attended with any success. On learning this history of the case, Dr. G. imagined, at once, that there might be some local cause, as a splinter of the bone, or an induration, or some other irritant that was operating as the original cause of the complaint. On examining the jaw, his suspicions were confirmed, by finding a small, hard tumor, occupying the place where the tooth had been extracted. It was proposed, at once, that this induration should be removed. But the parents of the patient, not being able to comprehend how so small a tumor could occasion such intense suffering, requested that the operation might be postponed a few days, and other means employed; but, as no relief whatever was obtained by the remedies administered, they consented, on the second day, that the operation should be performed.

By means of a small scalpel, Dr. G. succeeded in detaching readily the tumor from the edges of the alveoli, to which it seemed connected; and with the point of the knife, he excavated the top of the socket. To this cavity he applied a pencil of nitrate of silver, which immediately arrested the bleeding.

Although one hour before the operation, the patient had passed through a paroxysm of pain of such intensity that it became necessary for her father to confine her in his arms, to prevent her from doing injury to herself, yet, after the operation, there was no return of the paroxysms; and, at the end of a week, the patient returned to her home, in the country, relieved of her agony; and, even in that time, her general health had much improved.

*Cholera Infantum, fatal, January 27th*, 1844, by John S. Vandervoort, M.D. Dr. V. related the following case: J——, aged seven weeks, apparently a healthy child, though much troubled with flatulent colic, was found on the morning of January 27th, at six o'clock, in the following condition. He was lying on his mother's arm perfectly still, with his eyes wide open, and apparently intently fixed upon her; his skin was bathed in profuse perspiration; pulse scarcely, if at all, perceptible; respiration inconceivably quick, like the panting of an overrun dog on a hot summer's day; a sharp, dry cough, similar to that observed in the laryngitis of adults, and a peculiar guttural sound which was particularly noticed when he cried; transient pain in the bowels, especially before an evacuation, with almost incessant purging of a thin whey-like fluid, interspersed with flocculi. For some days his bowels had been rather often purged, but the quantity which passed from him was not great, not enough

to invite unusual attention to it. At seven o'clock, whilst lying on his mother's lap, he was observed to have spasms of the upper extremities; these spasms returned frequently, and were accompanied by a distortion of the mouth; there was also slight coma. An attempt was made to get the child to swallow some milk and water, but deglutition seemed to be wholly arrested. As the dissolution of the child was momentarily expected, no attempt was made to relieve it; but, after the lapse of another hour, as he seemed a little more comfortable, his feet were placed in a warm mustard-bath, and turpentine applied freely to the throat and chest. After the bath, the spasms came on less frequently, and he lay quietly, with his eyes closed. The pulse was now perceptible; it was not remarkably quick, but very small; the respiration was less hurried; the purging continued almost incessantly; his feet and hands were rather cold before and soon after the bath. In this condition he remained during several successive hours. He was now put, for a few minutes, into a pail of warm water; whilst there, he faintly cried twice, making the same shrill noise as before noticed. A few moments after he was taken from the bath he expired, without the slightest struggle.

*Post mortem* examination sixteen hours afterwards. This was made by Dr. William C. Roberts, to whom we are indebted for the following account of it.

On removing the sternum, the thymus gland appeared lying upon the roots of the trachea and great vessels, and overlapping the base of the heart. It was of a pale color, very thick (five-eighths of an inch), and weighed 3 drs. 55 grs. The heart was healthy; foramen ovale large, but wholly impervious; and the ductus arteriosus reduced to an imperfect chord. The lungs were crepitant throughout; in spots only very slightly congested. The liver was softened, congested, and variegated by the admixture of a chocolate brown with a lighter brown, approaching the buff or yellow, so as to give a distinctly marbled appearance to the parenchyma of the viscus. The gall-bladder was very small, and contained a small quantity of rather pale, viscid fluid.

The intestines were contracted and contained a large quantity of thin, whey-like fluid, of a sour smell, mixed with little yellow flocculi in great abundance. Beginning at the rectum and ascending to the stomach, the glands of Brunner, in the large intestines, were found in immense quantities, very large, and presenting the appearance of white, hard elevations, with a black central spot-orifice. The mucous membrane here was pale but not softened; in the ileum it was extremely so, and several of Peyer's plates were very distinct, presenting the appearance of long, white, elevated surfaces, sprinkled with minute, dark points. In a few instances capillary vessels ran toward and ramified around the plates. The mucous membrane of the stomach was pale and rather soft; every other viscus was healthy.

*Uterine Hydatids*, by John H. Griscom, M.D.—In August, 1843, Dr. G. was consulted by Mrs. J. E——, of Macon, Georgia, for a hemorrhage from the uterus, of three months duration. She is twenty-three years of age; has a child nineteen months old; said at the time of Dr. G.'s visit she was not pregnant, and had a miscarriage of something in February last; but the ejected mass had no perceptible organization, that Dr. G. could learn.

She attributes the hemorrhage to sudden exertion in lifting her child

when taken suddenly ill. At his second or third visit, Dr. G. made an examination of the abdomen, which he found much enlarged, being about the size and form of the uterus at the sixth month of gestation. The os tincæ was open sufficiently to admit a finger. The uterine souffle was clear at the lower part of the abdomen, over the pubis, but no fœtal pulsation could be distinguished at any point. He gave it as his opinion that she was pregnant with *something*, and that the hemorrhage proceeded either from a partial separation of the placenta or from its being placed over the os uteri.

On the 1st of September, Dr. G. was sent for early. He found her evidently in labor, with severe pains, accompanied with faintness, but a good pulse. No hemorrhage for four or five days past. The os tincæ dilated readily, and the placenta was found presenting, so that no judgment as to the nature of the uterine contents could yet be formed. In four or five hours a piece of the placenta was thrown off, which opened the way for the contents to be expelled. It proved to be about three or four pints of *hydatids*, variously sized, averaging that of a hickory nut. They came away in detached portions, and were followed by the placenta, which appeared of the full term size.

A singular affection attended the labor and the first few days of convalescence. This was a most distressing pain at the inside of the fingers and thumbs of both hands, and part of the palms, especially the inner part. The skin had a reddish or purplish appearance. The feeling was described as similar to that of the parts when they had been *mashed*, or when frozen and held to the fire. It lasted five or six days, and gradually subsided; the various applications which were suggested rather aggravated than meliorated the suffering.

*Case of Elephantiasis Scroti*, by F. Campbell Stewart, M.D.—This case of elephantiasis scroti, which Dr. S. saw at the Bellevue Hospital, is only of six months duration. It is accompanied with some considerable hypertrophy of the penis. The patient is an Irishman, who has been in this country about ten months only; the disease is not far advanced, and it appears to be stationary. It is attributed by the patient to the fact of his having bathed several times last summer, while in a state of perspiration, in the river St. Lawrence, on the banks of which he was laboring in the harvest.

*Extraordinary Case of Vicarious Menstruation*, by Dr. F. C. Stewart, M.D.—Margaret Campbell, the patient thus affected, has had her arm swollen to an enormous size at five separate and distinct epochs, and always after an attack of dysmenorrhœa. The swelling has invariably continued until the restoration of the catamenial discharge; immediately after which it begins to subside, and continues gradually to diminish until the arm is restored to its normal condition. It is now seven years since she first was troubled with it, and she has been as long as two years without having it to recur. Almost every variety of emmenagogue treatment has been pursued, and generally with very undecided effect. The arm has now been swollen since the month of September [this was on Nov. 18], and is so large as to measure fifteen and a-half inches round the elbow, where it is the largest; the fingers and hand are likewise much enlarged and disfigured. The general health of the girl is good, and she experiences but trifling pain in her arm. She states that she is

married, but has never borne children. The first invasion of the accident is attributed to her having put her hand into very cold water immediately after using some that was hot. Having her menses at the time, this imprudence checked them, and in a short time afterward the arm began to swell. So serious was the malady supposed to be by the surgeons who first saw it, that they are said to have recommended amputation.

[Since the foregoing statement was made to the society, we learn from Dr. Stewart that he has succeeded in restoring the menstrual discharge, by means of two setons, the one placed in the thigh, and the other in the hypogastric region; and that the arm has again returned to almost its natural size.]

*An Anomalous Case of Disease*, by H. D. Bulkley, M.D.—The patient referred to was a little girl, between two and three years of age, of rather a feeble constitution, but who had never needed Dr. B.'s services until the past spring, when she suffered from functional derangements of the digestive organs of different kinds, mostly connected with torpor and irregularity of the biliary secretions. Dr. B. had prescribed for her but a few times, when she went to Boston with her mother, to spend the summer. While there and in the vicinity, she was at times quite ill, as Dr. B. heard, so much so at one time, that her life was despaired of; and at one period she had a severe attack of dysentery. She was brought back to the city in the early part of October, when she was well enough to be running about the house, though exceedingly pale; and Dr. B. was not called to see her until about a week after her return, when, in consequence of merely tripping as she had just reached her mother, she fell forward on her stomach and bowels. This was immediately followed by vomiting, and an excessive degree of prostration; such a degree, indeed, as made Dr. B. apprehensive for three or four days that she would sink under it. By means of careful nursing, however, with the aid of gentle stimulants and nourishing diet, she gradually revived to such a degree as to take notice of those about her, and afterwards to exhibit more or less interest in her amusements and toys; and at one time, she was able to bear her own weight for a moment, but was constantly in arms, or in her crib or cradle. She would sometimes continue to improve so much for several days as to lead to the hope of her recovery, and then would sink again. She was perfectly anæmic, and her condition seemed clearly to indicate the use of tonics; but she could hardly bear any kind of tonic or stimulant, even in the smallest quantity, for more than a day or two. The skin was generally soft and inclining to be moist—pulse generally from 130 to 140, occasionally as low as 120. Her bowels were in remarkably good order most of the time; the stools generally consistent and figured, and of good color. The liver was very much enlarged, extending, perhaps, three inches below the margin of the ribs, and presenting considerable prominence there, and also in the epigastric region.

This is an imperfect sketch of the general history, &c., of the case. The most singular part of it, however, consisted of tumors on different parts of the cranium, which were first noticed three or four weeks before her death. The one first discovered, and which was the smallest, was near the vertex, and was oblong in shape, and about two-thirds of an inch in its largest diameter, and one-third of an inch in its shortest diameter, with an elevation of two or three lines. Another one of a large size, say one

and a fourth inches by half an inch, was situated about half an inch in front of the left ear, and parallel with it. On the right side, there was an elevation two or three inches in length, and nearly an inch in breadth, extending horizontally along the upper edge of the squamous portion of the temporal bone, and thence above the ear and in front of it. There was also another elevation between one and two inches in length and of an oval shape, on another part of the right side. There was no discoloration of the integument over the tumors, nor was there apparently any pain or pressure, although the irritability of the child was such that this could not be determined on with certainty. They were firm to the touch, and contained no fluid. They were very analogous in shape and general appearance to syphilitic nodes; but the case was one of absolute certainty that they could have no origin of this kind. It ought, perhaps, to be remarked that the anterior fontanelle was nearly as open as at birth. What the nature of these swellings was, Dr. B. was unable to say, in a patient of this age, never having met with a similar case, nor had Dr. Delafield, who saw the patient in consultation with him. There was, besides, a tumor on the end of the nose, which gradually increased to the size of a pea, which presented a pale and rather livid appearance, and seemed tense, as though it contained some viscid fluid, and which was said to have broken and discharged some fluid after the body had been removed to Boston for burial. This was also something which Dr. B. had never seen before; and he regretted very much his inability to learn the state of the internal organs after death; but permission to examine the body could not be obtained.

This case, like many others which occur to the profession, said Dr. B., though extremely interesting to the individual, is of but little use to his brethren, as it does not present distinctness enough to render it of any practical value.

*Extraordinary Case of Mental Aberration*, by James Macdonald, M.D. —Dr. Macdonald stated that he saw, during the month of July, in consultation with Dr. Griswold, a boy aged four years, with light hair and eyes, of ordinary stature and proportions, and a well-formed head, whose mind had been singularly disordered for about a year.

His organization was more delicate than that of the other children of his family, and his parents had always thought his intellectual developments comparatively precocious. He talked more fluently and distinctly than others at the same age. He had scarlatina when two years old, and recovered without any unpleasant consequences. When three years old, he was seized with "crying fits," as his mother called them, which, as nearly as could be ascertained, arose from pain in the head. These, after the lapse of two months, were followed by loss of speech and of intelligence. He did not understand what was said to him; he contracted bad habits—passed urine and fæces involuntarily—became exceedingly jealous of other children, scarcely ever seeing without assaulting or beating them; appetite for meat voracious; would snatch it from the fire while it was undergoing the process of cooking. In fine, he became perfectly ungovernable, and could not be controlled either by kindness or coercion. His animal propensities reigned supreme. His head was unnaturally hot, his pulse quick, his tongue coated, his skin sallow. During most of the time he slept indifferently. Treatment—calomel and other cathartics, and an issue in the

nape of his neck. Under this treatment he has improved. He now sleeps well; has become quite docile and manageable; comprehends what is said to him, recognizes persons, and begins again to utter articulate sounds.

*Case of Spina Bifida.* By Dr. White.—During the month of August last, Dr. White visited a child of Mr. I——, while on a visit to the country. The child was eight months old, and of healthy appearance. His attention was directed to a tumor occupying the sacral region, about the size of a man's fist. At first he was somewhat in doubt as to the character of the tumor; but at the suggestion of his father (Dr. White of Hudson), he tested its translucidity with a light. Finding it filled with serum, he concluded it was a case of Spina Bifida. A puncture of a valvular form was made, and about a gill of clear serum escaped. For a day or two after the operation, the child appeared indisposed, and had occasional spasms. It soon, however, regained its usual health, and the sac again filled with serum.

Dr. White recommended an occasional repetition of the operation, with compression; but he was subsequently informed that the parents are opposed to any further treatment.

*Case of extensive Injury of the Leg, resulting in Gangrene*, by A. G. Thompson, Jr., M.D.—Dr. Thompson read as follows: On the 10th of November, 1843, Mr. Josephus Brockaway, aged 50, dentist, of Albany, while in the act of stepping from one of the Brooklyn Ferry boats, at Fulton slip, New York, about 7 o'clock in the evening, missed his footing and fell between the bridge and vessel, by which means the left thigh, from the knee-joint to the pelvis, was jammed, and the femur fractured. He was immediately extricated from his perilous situation and taken to the Ferry House, bleeding considerably. Doctor A. G. Thompson was sent for and arrived within ten minutes after the accident. A tourniquet, composed of a twisted handkerchief, was applied to restrain the hemorrhage, and the gentleman conveyed to his lodgings, No. 84 Broadway. He was carried to his room under the direction of Dr. Thompson; and being found much prostrated, the pulse being scarcely perceptible, hands and feet cold, brandy toddy was administered. A messenger was sent after Dr. A. Sidney Doane, who arrived at 9 P.M., with Dr. Willard Parker, Professor of Surgery in the College of Physicians and Surgeons. Previous to the arrival of these gentlemen, about three ounces of brandy, and 25 drops tinct. opii, had been given by Dr. Thompson. The injured limb was then examined; the femur found fractured in its inferior third, the muscles and skin on the inner and posterior parts of the thigh extensively bruised and jammed, so as to present to the touch a jelly-like feeling, increased by the effused blood. There was an opening in the popliteal space of sufficient size to admit the extremity of the index finger, from which the hemorrhage had occurred. The leg and foot were cold and insensible, proving the existence of extensive injury to the nerve and artery. On consultation, amputation of the thigh was considered absolutely necessary, no hope being entertained of saving a limb where such extensive injury to the muscles and bloodvessels was evident. The extreme prostration of Mr. Brockaway precluded the idea of immediate amputation. It was, therefore, unanimously decided to continue the administration of stimulants,

with laudanum, during the night, and to endeavor by those means to aid nature in bringing on reaction, before proceeding to operate. The injured limb was placed in a double inclined splint, and the patient made as comfortable as possible in his condition.

Saturday morning, Nov. 11, 9½ o'clock. Mr. Brockaway has passed an uncomfortable night. The brandy has been administered as freely as was deemed necessary by Dr. J. G. Candee, who remained with him. Two hundred drops of laudanum were given during the night, to relieve the agonizing pain of the injured limb. Has urinated. Pulse 140, and very feeble; skin moist and rather clammy.

Drs. Doane and Thompson, Professors Parker and Robert Watts, visited the patient; and on consultation, it was concluded that there was not as yet sufficient reaction to justify amputation: the operation was postponed until 2½ P.M. Stimulants and arrow root to be given.

2½, P.M. Patient lies in the same condition as in the morning. The operation was again postponed until Sunday morning.

7, P.M. Drs. Doane and Thompson found the patient still much prostrated; pulse very feeble, 140. The limb was examined and found swollen—the cellular tissue of the thigh infiltrated with air. The brandy and opiates were ordered to be continued, with the addition of chicken tea and gelatin.

Sunday, 10 A.M., Nov. 12. Has passed a more comfortable night; pulse 135, feeble, small. Limb more swollen; air more distinct: foot and leg cold. The condition of the patient was considered as very critical; it would seem as though life was kept up only by the administration of the most potent stimulants and most nourishing diet. It was thought that in the absence of reaction, an operation would be extremely hazardous, as it was doubted whether the patient could support it: and in case he did, whether the necessary reaction would ensue to prevent his sinking. The prognosis was considered extremely unfavorable, with or without an operation. Stimulants and arrow root continued.

Sunday, 6, P.M. Has complained much during the day of pain in the injured thigh, but is now easier. The following pills were ordered, two every three hours:

℞ Carb. Ammoniæ, ʒi.,
Pulv. Gum Opii, gr. viij, in 16 pills.

Brandy to be continued as heretofore.

Monday, Nov. 13, 9, A.M. Has rested tolerably; pulse 135; skin clammy; has urinated freely. During the night took a pint of brandy. Swelling of thigh same as yesterday. Leg and foot of injured side cold. Continue treatment.

2, P.M. Pulse 140; complains of stupidity from opium and brandy. Ordered chloric ether, ʒj. every two hours, and wine to be substituted for brandy in arrow root. Discontinue pills.

6½, P.M. Pulse 138; skin more dry: feels quite comfortable and finds the wine and ether to agree with him.

Tuesday, Nov. 14, 9½, A.M. Has passed a comfortable night; pulse 128, fuller and stronger than since the accident, showing the first evidence of healthy reaction. The leg of the injured side presents a lead color from the knee downward; on the inside of the thigh there is a large, dark-colored, gangrenous "bulle," extending from the knee upward 5 inches; swelling about the same; fluctuation and air very marked throughout the thigh. As there is every appearance of extensive slough-

ing, it was deemed most advisable to leave the case to nature, until the probable extent of gangrene should be known. Directed an injection of wine and arrow root to relieve bowels; continue wine and ether as before.

7, P.M. Bowels have been moved. On examination a line of demarcation is visible about one inch below the patella, extending around the limb to the opening in the popliteal space. A small puncture was made by Dr. Parker on the inside of the thigh into the gangrenous "bulle," which gave exit to a quantity of fetid gas and blood. Ordered chloride soda to be applied.

Wednesday, Nov. 15, 9, A.M. Drs. Doane and Thompson, having visited Mr. Brockaway, learn that he has passed an uncomfortable night. Milk punch was ordered instead of wine and arrow root. Pills resumed.

12, M. Dr. Parker enlarged the opening made yesterday, extending it upward through the gangrenous "bulle" five inches, and another, three inches in extent, was made on the outer side of the thigh. Lint, dipped in a mixture of chloride of soda and water, was applied to the incisions. The chloric ether was directed to be given every three hours, and an enema was ordered. Milk punch, &c., as before.

Thursday, Nov. 16, 12 o'clock. Has slept well: pulse 120, fuller and stronger than heretofore. Enema has operated; swelling of thigh diminished. Ether every four hours. Dressings were removed and fresh ones applied. Leg is perfectly gangrenous.

Friday, Nov. 17, 9, A.M. Has slept well during latter part of the night. Had, during the night, 1½ grs. opium and 9 grs. carb. ammon. Dressings were removed; swelling is diminishing.

Nov. 18. Pulse 126. Dr. Parker removed the gangrenous leg at the knee-joint, with but little pain and without any hemorrhage. The gangrene has extended on the under side of the thigh, a distance of three inches above the popliteal space. The muscles are sloughing slowly. The limb was dressed with lint wet with chlor. sodæ.

Sunday, 9, A.M. Pulse 120. The odor of limb very offensive; swelling of thigh less than yesterday: re-applied dressings.

Monday, Nov. 20. Pulse 118; granulations appearing.

Tuesday. Pulse 118; granulations increasing.

Wednesday. Pulse 116; applied yeast poultice.

Thursday. The yeast poultice has cleaned the limb so as to show the extent of the sloughs. The skin on the inner side of the thigh has separated, leaving bare the subjacent muscles. The adductors are, as it were, dissected out so completely as to admit the introduction of the finger to the bone.

Friday to Tuesday, Nov. 28. The poultices with the addition of charcoal, were continued. The sloughs have all separated on the inside of the thigh. On the under side, there appears to be considerable to come away. It was deemed advisable to remove the fractured end of the femur, which was done by making an incision across the anterior surface of the thigh, commencing at the slough on the outside, extending just behind the patella to the inner sloughing surface, and cutting from without downward and inward. By this the fracture was brought to view, and the inferior extremity of the femur removed without difficulty. The bone was found fractured down to the condyles. The extremity of the femur was entirely covered with granulations, and appeared perfectly smooth. It was deemed advisable not to interfere with

the process of nature, as she appeared to be working admirably. The pain was not great, and no important vessels were divided, not two ounces of blood being lost. Dressings of limb were then applied.

Wednesday, Nov. 29. Is comfortable—has suffered somewhat from pain during the night. Fresh dressings were applied by Dr. Thompson.

Thursday. Adhesive straps were put around the thigh, and a bandage to approximate the muscles. Patient is doing well; granulations are increasing.

Friday. Limb was dressed this morning; most of the sloughs have separated. The pus is more healthy in its appearance. Lint, smeared with simple cerate, was applied to the healthy granulations, and a bandage to cover the whole stump.

Saturday. Stump is looking better; was again dressed as yesterday.

Sunday, Dec. 3. The pus is straw-colored; the surface of the stump looks remarkably well. Dressings re-applied.

On the 4th December, Mr. Brockaway left the city for Albany, where he was attended to by Dr. A. March. Dr. Thompson has since understood that, on January 14th, he was well enough to go to church.

*A Case of Rupture of the Uterus.* By John H. Griscom, M. D.—Dr. G. was sent for by Dr. Nichols, on the 3d of September, at half past 1 P. M., to see with him a case of obstetrics, in the person of Mrs. Nelson. Dr. N. stated, on Dr. G.'s arrival, that she had had slight pains all the previous night, but that she had not sent for him until 8 A. M. He found the head presenting, low under the pubis, and movable; the labor pains moderate, occurring in regular intervals; and the woman apparently in good spirits and strength. In about an hour and a half after his arrival, say at 10 o'clock, the pains ceased, having been *gradually diminishing* for some time. The head remained in the position described, the efforts of the uterus having had no effect upon it. He waited patiently for a return of the pains, till Dr. G. was sent for, who found the patient on her back, with the head and shoulders well raised, the countenance pale and rather anxious, pulse 160, small, but with a degree of tension. On laying the hand upon the abdomen, it was found so exceedingly tender to the touch, as to render a full examination almost impracticable. A peculiarity was, however, observed in the position of the uterus, i. e., it appeared to be thrown forward much more than is usual at the fundus, and to be of smaller size, and more distinctly perceptible to the feel, than is common before delivery. The fœtal head was in the position before stated, and there it had been for several hours. The condition of the patient was such as to render a speedy delivery urgent, and the forceps were consequently employed with the least possible delay; but after they were fixed, the strongest efforts were insufficient to move the head from its position against the pubis, even with the additional aid of the single blade introduced under the arch. While making these efforts, upon laying his hand upon the abdomen to aid the removal of the child by pressure above, Dr. G. discovered at the left side a limb of the child projecting through the uterus, and lying in contact with the abdominal parietes. The terrible nature of the case, and the cause of the suspension of the pains, were now both at once made apparent. Renewed efforts were made to extract the child with the forceps, but this proved hopeless in consequence of their slipping; and as immediate delivery was absolutely necessary, turning was resorted to, which was speedily effected by Dr. Nichols.

The feet were grasped in the abdomen, outside the uterus, and the fœtus was extracted with the placenta attached, but too late to save the mother, who expired while the head was passing through the vagina.

The rupture was upon the left side, involving the fundus; and from the gradual subsidence of the pains, it must have been one of the cases described by Ramsbotham, as commencing with a small opening, and gradually enlarging as the labor continued. There was no sudden cessation of the pains, nor was there any complaint by the patient of something giving way, nor indeed of anything else, except general pain and vomiting, by which the nature of the case could at once have been determined, or even suspected.

*Self-Propelling Power of the Blood.* By Horace Green, M. D.—Opposite opinions, remarked Dr. G., are still entertained by physiologists on this subject. Treviranus, Oesterreicher, Wolff, and several other microscopists, declare, that "the blood is endued with the power of self-propulsion," which they suppose to be exerted in the capillaries, during life, independently of the heart's action, and to continue after the latter has ceased; while, on the other hand, Baer, Wedemeyer, and, more recently, Müller, deny as positively the existence of a self-propelling power in the blood.

Having been engaged of late in making some microscopic observations upon the blood and other animal fluids, this subject, said Dr. Green, among others, had engaged his attention; and he supposed it might not be uninteresting to the Society to hear the result of some experiments which have been directed to this point.

Müller, who denies the existence of a power in the blood, independent of the heart's action, allows that there are two conditions under which the blood in the capillaries of a transparent part, separated from the body, may still be seen in motion by means of the microscope. One, where the blood continues to flow from divided vessels—the escape of the blood from the openings of these divided trunks imparting or causing a motion of the blood in the minute vessels toward the openings in the larger ones. The second condition under which motion is perceptible, is, when the direct rays of the sun are allowed to fall on a moist part separated from the body. The surface of the part thus becomes dry and wrinkled, and this constriction causes a rapid emptying of the capillary vessels, which, together with the effect of illumination by the direct rays of the sun, produces a flickering appearance; and in this way he imagines opposing observers have been deceived.* Dr. G. has himself observed, in numerous instances, motion of the blood in capillary vessels, active and continued, independent of the heart's action, when the above condition of things could not have existed.

By placing under the field of the microscope the most transparent part of the web of the foot of a very small frog, Dr. G. has observed many capillary vessels so minute as to be capable of admitting only a single fill of red globules. These globules may often be seen running different directions in parallel vessels; and, not unfrequently, single globules, and sometimes two or three together, may be observed, separated apparently at a considerable distance from any others, and yet, moving on slowly in some instances, and rapidly in others, independent of any *vis a tergo*

* Müller's Elements of Physiology, Vol. i., p. 236.

power; so that, as the contractile power of the capillaries (except so far as regards the natural elasticity of their coats), is denied by these physiologists, the motion of these single globules must be independent of the heart's action, and dependent on an inherent power of their own. Not only this, but not unfrequently in watching the current of globules in these minute vessels, Dr. G. says that he has observed them to be suddenly arrested, and then to *recede* for some distance along the course of the vessel. This phenomenon is accounted for by Müller, on the supposition that the vessels may have been compressed by slight motions of the frog. This could not have been the case, said Dr. G., in one instance which he recently noticed, where a capillary vessel was seen to pass directly through the centre of a pigment cell, in a frog's foot. In this vessel, red globules were seen repeatedly to run in *different directions* in the same vessel, and to pass each other in the centre of the cell. If the motion of the blood in the capillaries is entirely dependent upon the heart's action, how can we account for this power being exerted in different directions in the same vessel?

Other evidences, said Dr. G., of this inherent power of the blood have been observed. Having removed an elongated uvula, a few days since, the most transparent portion of the truncated part was placed under the field of the microscope. Upwards of half an hour after the part was excised, the blood was seen to move slowly along the capillary vessels; and yet, the precaution was taken to keep the piece moistened, so that the vessels might not contract from drying.

Dr. Carpenter designates this motive force of the blood, the "capillary power" of this fluid; and he believes that we are furnished with all the proof that can be needed of the existence, even in the highest animals, of a capillary power, which, though usually subordinate to the heart's action, is sufficiently strong to maintain the circulation by itself, when the power of the central organ is diminished.* But the term which he employs, capillary power, is evidently inappropriate, inasmuch as this power remains in the globules *after* they are withdrawn from the capillaries. By placing a drop of fresh arterial blood upon the glass, and examining it with the microscope, the globules will be seen to be in active motion for *several minutes* after they are withdrawn from the artery; and in some instances, Dr. G. says that he has observed them to form currents, and to circulate regularly, for a short distance, as if they were still in the capillary vessels. The same vital movements may be observed in a drop of the menstrual fluid, if examined immediately after its escape from the vagina.

These experiments may tend in some measure to establish the theory that the blood is endued with a vital power of self-propulsion.

*Violent Effects from the External Application of Oleum Tiglii.*—Dr. Green also mentioned that a entleman came to him complaining of a sore throat, and stated that he had been recommended to use croton oil externally for it. Dr. G. warned him of the dangers attending its application; but notwithstanding this advice, he applied three drops to his throat, which was followed by violent inflammation. Two large abscesses formed, which pressed on the trachea, impeding respiration, and requiring to be opened by the lancet. Erysipelas of the scalp also supervened. He is now doing well. The Society was disposed to ascribe this result to an idiosyncrasy.

* Principles of Human Phys., by Wm. B. Carpenter, M. D., p. 412.

ART. V.—*On the Use of Oleum Tiglii, externally applied, in cases of Dysphonia, Cynanche Trachealis, &c.* By S. CORP ELLIS, M. D. of New York.

WILL you allow me to trespass with a few lines upon the pages of your valuable journal, for the purpose of recording the effects of oleum tiglii externally applied, in the second stage of croup? Having for some time been in the habit of employing this agent with entire success, in cases of dysphonia from catarrh, I was induced, from its peculiar action in one instance, to use it in cynanche trachealis, and with the same good result.

*Case of Dysphonia.*—The sister of J. R., Esq., of this city, an estimable lady, who for several weeks had been unable to speak, except in a faint whisper, having tried some remedies in vain, consulted me. I directed her to rub three drops of Croton oil along the trachea; and having done this, she had, in a few hours, a sense of constriction about the upper part of the thorax, followed by "*two*" expectorations of sanguineous mucus. Shortly after this, her voice became quite natural. This case is the only one in which I have ever observed the least unpleasant effect.

*Case of Cynanche Trachealis.*—A little son of Mr. J. Hull, aged about 3 years, had, according to its mother's account, been sick several days of a bad cold. I found the little sufferer struggling in all attitudes upon her lap, with high fever, great angina, and the never to be mistaken cough. Having directed everything to be done according to the usual practice in severe cases, I took leave. The next morning, the child was much worse; he lay in a comatose state, with his neck stretched back to its utmost extent, countenance livid, respiration nearly annihilated. The parents made up their minds to part with their little darling, and that too very soon; and I could not give much encouragement to the contrary. But, as a *dernier ressort*, I ordered the following:

Ol. Tiglii, gtt. xii.
Adipis ʒ ii.
M. fiat unguentum.

A portion, the size of a large pea, was directed to be gently rubbed along the course of the trachea every fifteen or twenty minutes. I feared that my next visit would be *post mortem*, but was delighted to find the child better, in fact playing on its mother's knee; and she informed me that scarcely fifteen minutes after the first application of the ointment had elapsed, ere there was a visible change. The child now breathed easier, his countenance assuming a more natural appearance; coma passing away, with the forcible ejection of a quantity of tenacious mucus. The use of the ointment was continued at much longer intervals; the next day the membrane disappeared entirely, and the child was well.

I have had three cases of croup since, in which the second stage was about forming, before I was called to attend. In these I have pursued the same treatment with similar success.

[In Vol. I., page 125, of this Journal, mention is made of extraordinary cases, extracted from Hufeland's Journal and the London Medical Gazette, of hoarseness and aphonia treated successfully by the external application of Croton oil. The only case that we have ever seen noticed, in which bad effects resulted, is that of Dr. Green, given in the preceding article.—EDITOR.]

ART. VI.—*Remarks on the Diseases which prevailed in Princeton, N. J., during the fourteen months previous to November*, 1837. By GEORGE M. MACLEAN, M. D., of New York, late President of the Medical Society of Middlesex County, New Jersey.

As President of the Medical Society of Middlesex County, New Jersey, it was my duty to deliver an Address at their semi-annual meeting, in 1837. Believing that the object of the Society would be better promoted by relating facts, than by advancing speculations, I prepared an Address based on the following materials; but owing to my absence, it was not delivered. These remarks are now submitted to the consideration of the profession.

*Fever.*—In consequence, no doubt, of its elevated position, and the absence of marshes, Princeton has been remarkably exempt from malarial diseases. Indeed, I remember when it was seriously denied by its older inhabitants, that a case of intermittent fever had ever originated in the place. Still, cases of a typhoid form of fever have from time to time occurred. In the autumns of 1835 and '36, it was particularly prevalent. In the latter year, owing to attending circumstances, it attracted much attention, and excited great alarm, which certainly increased its violence.

The disease commenced with a chill followed by fever, which at first assumed the remittent form, but very soon became continued. After three or four days, the pulse, which was uniformly soft, rose from 80 or 90 to 130 and upwards, and never fell below 130 till death approached, or convalescence was established. But little pain was experienced, and that little in the bowels. In a few cases there was cramp in the legs. The bowels became rather loose; the evacuations were serous, with greenish flakes floating in them, at times thick and of a greenish black color, and as the case became worse, blood; toward the last, pure blood would be discharged. The symptoms were those of ordinary typhoid fever with determination to the bowels, unless those already mentioned can be considered exceptions.

A few post-mortem examinations were made. The only appearance found which would account for the symptoms, was a congestion of the mucous membrane, particularly about the opening of the ductus choledoens and the ileo-colic valve. The liver was sound. There was, in one case, ulceration of the glands of Peyer, and enlargement of the mesenteric glands; but these appeared of long standing. In this case the fur on the tongue was peculiar in appearance: the surface of the tongue was fiery red, and from it, at small distinct points, the fur arose and spread out so as to meet similar risings; they were like miniature mushrooms. They were probably dependent upon chronic inflammation of the stomach, aggravated by the fever. The posterior portion of the lungs was congested; the anterior was almost white, though speckled greyish. This appearance was, no doubt, in part, though I think not entirely, the result of posture. Their texture was firmer than natural.

Almost every variety of practice was employed, but none appeared to be of any service, except the use of large doses of calomel at long intervals, so as to change the character of the alvine secretions. Bloodletting, general or local, large or small, was positively injurious. Diaphoretics were useless. The serous character of the evacuations would appear to forbid the use of salts; they were, however, given in some cases with

senna: the effect, as might be expected, was bad. Scarcely any purgative could be borne. Calomel, in small doses, aggravated gastric distress, if present, or produced it if not; but taken in large doses, at long intervals, it rendered the evacuations less frequent and uncomfortable, while it changed their appearance to a dark green or black, and their consistence to that of tar. This was the forerunner of more healthy dejections, if these ever came. After these evacuations were secured, and mercurial action established, stimulants of any kind were well borne, and, indeed, appeared necessary to prevent sinking. The hemorrhage from the bowels disappeared as the mercurial action was established. A black boy was attacked in the same manner as the other patients. His pulse being 90 at the time of my first visit (the evening of the 4th day), I administered 20 grains of calomel. Finding him without change on the morning and evening of 5th and morning of the 6th day, I on each occasion repeated the dose. At noon, of the 6th day, he was freely salivated, the evacuations from his bowels being less frequent and more natural: but his pulse had risen to 130, and there was more appearance of distress. A gentleman, who, on this occasion visited him with me, advised the application of cups to the abdomen, and a dose of rhubarb and magnesia. The cups, very fortunately (as I have since thought), drew but little blood. The purge operated freely, but with no good result; for, on the following day (the 7th) every vestige of mercurial action had gone and the violence of the symptoms had returned. I repeated the scruple doses of calomel that morning and evening, and on the morning of the 8th day. These renewed the action on the salivary glands. The remedy was again discontinued, but with the same effect as before. On the 9th day I was obliged to return to the same remedy, two doses of which now produced its specific action, which was afterward kept up by repeating the calomel in smaller doses, its effect upon the bowels being controlled by opium. After the violence of the disease was thus overcome, whiskey and bark was administered freely, and with very good effect. The convalescence was very rapid, which, I believe, was owing to the effects of the remedies being obtained without exciting the stomach and bowels by their frequent repetition in the first stage.

In the autumn of 1837, the fever was far less prevalent; a few cases, however, did occur, somewhat of the same form as those of the previous year, there being the same disposition to alvine hemorrhage, but differing from them in being more distinctly remittent in the onset, less rapidly assuming alarming symptoms, the arterial action not being so rapid, and the alvine evacuations being less serous and flaky.

The most successful treatment appeared to consist in giving free doses of calomel, followed by castor oil or some other mild cathartic, particularly avoiding drastics which, indeed, seemed, in some cases, to produce hemorrhage; afterwards establishing mercurial action, which was well effected by calomel with Dover's powder, giving an anodyne at bed time, and when the excitement was sufficiently subdued, tonics.

When the system appeared to be sinking, blisters or sinapisms, with the internal use of stimulants, as wine whey, brandy toddy, carbonate of ammonia in pill, with ext. gentian or in solution, were very beneficial. The bleeding was checked by spts. turpentine or by acetate of lead, grs. ii., opium gr. ¼, every two hours, while awake.* It may be asked why

* I am persuaded that much harm is often done by awaking patients to give them medicines, especially when restlessness is a symptom; therefore, unless there be some

were not large doses of calomel repeated this year as in the last? I would reply that, this year, the disease was less violent. The last year it appeared that the systems of the sufferers were oppressed with a load of miasm, which rendered them less susceptible of the specific action of the necessary remedy, than those of this year, notwithstanding the latter were in kind under the same influence.

*Pertussis*, which had been very prevalent in the summer of 1836, was occasionally met with in the autumn and the early part of the winter; but it presented nothing remarkable in its course, excepting that a large proportion of cases assumed distinctly a tertian paroxysmal form. It yielded, in the violence of its symptoms, to an emetic, followed by mild purgatives (of which none answered better than calomel) and expectorants. After the stage of excitement was passed, much benefit was obtained from bark and from anodynes at bed time; of these, Dover's powder was preferred. Belladonna, which had of late been much extolled as a curative and preventive of this disease, was extensively employed, but without exhibiting any satisfactory effect.

*Neuralgia.*—About the same period, I met with several cases approaching nearer to the tic douloureux, as described by the older writers, than any I had before witnessed. The pain was confined to one side of the face, was aggravated regularly in the evening, at which time it was excessively severe, and it was unattended by other symptoms, general or local, of phlogosis. Its duration was about a fortnight. It was removed by gentle evacuants, aided by warm anodyne applications, and followed by pills composed of Carpenter's extract of bark, gr. i., and ext. stramonium, gr. ¼, every second hour within the ten preceding the expected paroxysm.*

*Scarlatina.*—In October, 1836, I met with a solitary case of scarlatina, and, in December, with one of dropsy consequent to scarlatina. In January and February, 1837, this disease was very prevalent. Though, in some cases, it was of the simple form, in most it assumed the anginose, and in a few the symptoms (high excitement rapidly followed by great prostration, unequal distribution of animal heat, low muttering delirium, lividness of the eruption, and dark sloughing appearance of the fauces) entitled it to the appellation of malignant.

I observed an appearance which was new to me, nor is it mentioned by any author whom I have consulted, namely, of small vesicles about the fauces, before any uneasiness was felt in those parts. In every case in which the throat was examined on the first approach of constitutional symptoms, these vesicles presented themselves; I could then, with confidence, predict the appearance of the rash.

Although aware that venesection is often highly advantageous, having witnessed the best effects from it in my own practice, in other years, I did not, that season, think proper to perform it in any case, and I had no reason to regret having abstained from it.† If the stomach was oppress-

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particular reason for a contrary practice, I always direct the patient not to be aroused from a comfortable and not protracted rest.

* Fresh leaves of stramonium form an excellent application in such cases.

† I may here express the apprehension that the strong terms in which most writers describe the caution necessary in the use of this remedy in this disease, may deter the younger members of the profession from resorting to it in cases where it is indispensable.

ed, or if there was much mucus in the throat, in the early stages, emetics were productive of benefit, apparently rather by removing foreign matter than by their constitutional effects. Purgatives were necessary throughout the attack. Calomel given in a separate and dry state, so as to act upon the ulcers in the throat as well as purge, was very useful. It was followed by a laxative so as to secure its action on the bowels. Occasionally it was necessary to check a disposition to diarrhœa by opium; but this did, in no case, obviate the necessity of giving laxatives. Diaphoretics (of which none was more grateful or beneficial than the neutral mixture) and refrigerants, completed the constitutional treatment. The best applications to the fauces, in the first stage, were steam followed by cold water. The infusion of capsicum was used, but with little benefit. Slippery elm and sassafras barks afforded much relief.

*Dysentery.*—In July, August, and September, there were a few cases of dysentery; but they were of a light kind which yielded readily to mild laxatives, demulcents, infusion of ipecacuanha, in doses not sufficiently large to produce emesis, pediluvium, and an anodyne at night. The ipecacuanha appears to be, in this disease, invaluable. If an emetic be thought proper, this is sufficiently active and without the danger of aggravating the irritation of the mucous lining of the bowels. If this be not thought advisable, still the remedy, in small doses, will regulate the bowels, change the character of the stools, determine to the surface, and keep the skin in a comfortable and moist state. Of all anodynes, Dover's powder appears to be the best. No doubt much of its efficacy is due to the ipecacuanha controlling the effect of the opium.

*Bowel Complaints not attended by Fever, and Diseases of the Air Passages,* prevailed at different periods. The latter class are generally attributed to excessive cold or vicissitudes of heat and moisture; but I have frequently remarked that they have not confirmed this observation. During the year under consideration, the proportion of such diseases to all others, exclusive of surgical and such as are peculiar to females, was greatest in April, May, December, and February, and least in September, October, June, and March. It is not a strictly correct remark, but it is nearly so, that diseases of the bowels prevailed in an inverse ratio to those of the respiratory organs. The months in which they prevailed in the largest ratio, were October, September, June, and August; and their proportion was least in January, February, May, and April. Nothing remarkable was observed in either the symptoms or treatment of these diseases.

ART. VII.—*On Dietaries.* By CHARLES A. LEE, M.D., Professor of General Pathology and Materia Medica in Geneva Med. College.

## No. II.

*Concluded from Vol. I., page* 238.

IN continuing my remarks on the subject of DIETARIES, I shall aim to present such details, either in a tabular or other form, as will enable the reader to institute a comparison between those of the public institutions of Great Britain and the United States; and thus, perhaps, lead to improvement and reform, in cases where they are called for, and are practicable. That dietetic regulations exist in some of our orphan asylums, poor-houses, and prisons, which ought to be abolished, I think must be admitted by all who have paid any attention to the subject; and that salutary changes, both as respects the quantity and quality of food furnished the inmates, will ere long be brought about, we have abundant reason to expect.

No one, indeed, supposes that those, who by misfortune or crime have become a public charge, are to fare luxuriously every day; but certainly they ought to be supplied with plain and substantial food, in quantity sufficient to maintain health and strength; and this may be determined, in a great degree, by actual experiment. While, on the one hand, there should be no extravagance or luxury in a prison or a poor-house; so, on the other, a minimum allowance of food, or, in other words, starvation, should not be recognized as an instrument of punishment. As the loss of health and strength through the inadequacy of food, is both barbarous and cruel, so also is it a punishment, in most cases, not contemplated by law, and worthy only of the most savage tyranny, among a nation of barbarians.

It may, perhaps, be objected, that the amount of food which we would supply, is far greater than many honest and hard-laboring men are able to obtain for themselves and families; and, therefore, that it would rather tend to encourage than prevent crime and idleness. If this be so, it is to be regretted; and the philanthropist and statesman should seek to promote such measures as will give to honest labor an adequate reward: but who does not feel that the blessings of independence, self-respect, and personal liberty, with Croton and a crust, would far outweigh the luxuries of a Dives in a prison or an almshouse. The question, moreover, is not what the honest laborer can obtain, but what is necessary for the prisoner; whatever that is, it should be supplied, and at the least possible cost: and I am happy to learn, that slops, in which a small quantity of lean beef and bone has been boiled (*miscalled soups*), are not as frequently furnished, in some of our public charitable institutions, as formerly, and it has been seriously debated whether starvation should be any longer practised as a means of punishment. Mr. Fallon, the keeper of the City prison, who has actually come out in a letter in the public prints, apologizing for not allowing the prisoners vegetables, especially potatoes, says that the latter were refused when offered to the prisoners, and suggests that as they are too good for those incarcerated for crime, they ought to be reserved for those imprisoned for debt, and other more worthy objects. Thus these luxuries, which are so indignantly rejected by the denizens of the Five Points, and State Prison candidates, are to be reserved, by way of reward, for those who are more deserving of

such favors! The managers, too, of some of our orphan asylums begin to inquire, I am told, whether children over two years of age have *teeth*; and if so, whether this is not an indication that nature intended that they should be supplied with something solid to chew upon for food, instead of daily swallowing those thin, animalish potations aforesaid. Some, it is said, who have pressed their physiological researches still further, have found that the digestive organs of children are tolerably well adapted to the digestion of solid substances, and consequently maintain, openly and fearlessly, that a considerable portion of the food should be of a solid nature; that it should be derived both from the vegetable and animal kingdom, and that *variety*, both as regards quality and quantity, should be consulted in all Dietaries, both for the young, the middle-aged, and the aged. At any rate, they seriously doubt whether the experiment has not been sufficiently tried, as to the *minimum* quantity of food which will suffice for human existence, in countries, especially, where aliment is both abundant and cheap; and whether moral and religious instruction, with friendly advice, is not calculated to effect a more salutary reform in the habits of criminals, than the pain and privation of gnawing appetite, or even actual starvation. On these difficult and abstruse questions, I forbear to express any opinion.

In my first article on the subject of *Dietaries*, were the following remarks: "The ophthalmia, which has hitherto been the scourge of our orphan asylums and Long Island Farms' school, owed its origin to defective nutriment, and its propagation and obstinacy to want of cleanliness and ventilation. When these abuses were reformed, the disease disappeared spontaneously, as was anticipated. In the winter of 1840, an epidemic diarrhœa prevailed among the children on the Long Island Farms, attended with highly malignant symptoms, such as mortification of different parts of the body; ulceration, and consequent destruction of the eyes; a thin dissolved state of the blood; offensive odor from the skin, &c., &c. The diet of the children was wholly unsuited to their ages, being coarse and indigestible, with scarcely any milk whatever, and bread of a very inferior quality."

As this statement has excited some interest, and even been questioned by some of our city authorities, of whom, be it said with all due respect and humility, they are not always the best judges as to the most suitable Dietetic and Hygienic regulations for public institutions, or of the effects of those which have been adopted, I take great pleasure in presenting the following letters, addressed to the Editor of this Journal, by Dr. Morrell, who was the Physician of the establishment at the time, and has been ever since, and whose talents, zeal, and integrity, require no commendation at my hands.

"NURSERY HOSPITAL, LONG ISLAND FARMS.—*March 13th*, 1844.

"Dear Sir,—In compliance with your request, I now furnish you with the system of diet used, at this time, for the Nurseries of the Long Island Farms and Nursery Hospital on Blackwell's Island. This is in reference to the '*Poor House Mortification*,' which were better termed *Land Scurvy*, the cause of which is attributed to the former bad system of diet, and its disappearance to a much improved one. For a description of this horrid disease, I would refer you to the New York Medical and Surgical Journal, vol. iii., p. 53.

"The present diet is as follows:

| | | |
|---|---|---|
| *Breakfast for large boys and girls.* | Monday<br>Tuesday<br>Wednesday<br>Thursday<br>Friday<br>Saturday<br>Sunday | Bread, with coffee or tea, sweetened with molasses, and tempered with milk. |
| *Breakfast for children between two and five.* | | Turnips and potatoes mashed together, and tempered with milk for one day; for the next, milk-toast; and so alternately. |
| *Dinner for all.* | Monday | Beef-soup, with the meat and bread. |
| | Tuesday | Pork, boiled with potatoes and cabbage, with bread. |
| | Wednesday | Roast beef, with turnips, potatoes and bread. |
| | Thursday | Rice and molasses, or mush and molasses. |
| | Friday | Boiled beef, with potatoes and bread. |
| | Saturday | Salt fish mashed with potatoes. |
| | Sunday | Bread and tea or coffee, as at breakfast. |

*Supper for all.*—The same as at breakfast.

"To the above is occasionally added for dinner, boiled beets dressed with vinegar, raw cabbage dressed in the same way, and sometimes a bread-pudding; and, in the proper season, radishes, green peas, pepper-grass, green beans, etc.

"The diet for the hospital is much better than that for the nurseries. In addition, the hospital is supplied with butter, 3lb. per day; eggs, fifteen per day; with veal or mutton, at the discretion of the physician. Besides, the garden is made to produce an abundance of vegetables and fruits,—currants, gooseberries, strawberries, grapes, etc., of which the sick get their share.

"With such diet, scurvy and, consequently, mortification have disappeared from the nurseries. But ash-colored ulcerations of the mucous membrane of the cheek still occur occasionally at the Farms, and also some genuine forms of stomatitis. None have, however, terminated in gangrene since October, 1842. Under this diet, the average number of deaths has also diminished. From January, 1843, to January, 1844, there have been treated of all diseases, nine hundred cases; and, of these, sixty-six died, which is an annual mortality six less in number than have died on the Farms during the last twelve years: and this difference is rendered still more marked by the fact that, in 1832 and 1833, the mean number of individuals was not over four hundred, which is now six hundred; a difference equivalent to 50 per cent.

"Yours, very respectfully,

"Samuel Forry, M.D." "N. Morrell.

Upon further solicitation by Dr. Forry, as regards the precise quality of the diet used for the children at the period when the "land-scurvy" prevailed, Dr. Morrell made the following additional reply:—

"NURSERY HOSPITAL.—*March 27th*, 1844.

"Dear Sir,—At the period when "Poor House Mortification, or Land Scurvy" prevailed as an epidemic on the Farms, the diet was:

"*For Breakfast.*—Bread and tea, or coffee without milk, sweetened with molasses.

"*Supper.*—Same as breakfast.

"*Dinner.*—Bread and *beef soup, often without any vegetables*, for one day. Bread and the *beef of which the soup had been made*, for the next day, and so alternately.

"*Hospital.*—Not different from the rest, except the addition of about thirty

quarts of milk, used mostly for the eyes. A few crackers and a little butter and sugar for convalescents.

"I had much rather not have been called upon to furnish this information; but as the purposes of scientific research cannot be answered without a full view of all the circumstances, let the facts be stated.

"Yours, very respectfully,

"Samuel Forry, M.D." "N. Morrell, M.D.

Remarks.—No comment is necessary on these statements, as the facts speak for themselves. I mentioned in my former article, that "at the Half-orphan Asylum, in the Sixth Avenue, in this city, it was lately the custom to furnish boiled corn beef, cold, to the children on Sundays; but as it was found to produce a very general diarrhœa, it had to be laid aside, for this reason, during the summer months." In the New York Orphan Asylum, it has been the custom to boil beef for soup, and then, after roasting, to serve it up cold, the next day. Thus, after extracting all the natural juices of the beef, it must be rendered still more dry and indigestible, by condensing the fibrine by dry heat; both of these practices have been productive of great injury to the health of the children. But at the Long Island Farms, this absurd system seems to have been carried to the very height of perfection; a little bread of an inferior quality, as I know from my own personal and repeated observation, and a small quantity of slops, called tea, with molasses, for *breakfast;* for *dinner, soup!* that is, the wash in which coarse beef had been boiled, without vegetables, and a piece of bread—or the dry beef, cold, without the slops—and for supper, the same as for breakfast. No rice, no potatoes, no Indian, no milk, no butter, no cheese; nothing but bare cold, coarse beef, or beef-water; poor bread, and, as a luxury, a little tea or coffee and molasses! Even when sick, they fared but little better—a few *crackers*, and a little *butter* and *sugar*, being the only addition—*milk*, it seems, was thought more suitable for the *eyes* than for the stomach! If this is not out-Heroding Herod, in the "murder of the Innocents," we should like to learn what is. The effects of the system may be understood by the following extract, which we quote from Dr. Morrell's most interesting and valuable paper, in the 3d vol. of the New York Journal of Medicine, page 53:—

"About the middle of December, 1839, evidences of a constitutional change in many of the children were apparent. They had not lost much of their embonpoint, but were extremely dull and inactive, their eyes lacked lustre, their skins exhaled an offensive odor, and when any were taken ill, medicine no longer had its accustomed effect. Shortly afterwards, a great number were taken with a slight cholera morbus, which contributed to render their health still more precarious; and yet later, an incurable diarrhœa, followed by mortification, made its appearance. The diarrhœa would attack, produce most insupportably offensive evacuations mixed with much food that appeared unchanged, causing very little pain, but the most extreme debility, and terminating in from three to five days in mortification. This commenced somewhere near the junction of the mucous membrane and skin, about the vagina, or anus, or inside the cheek, with a dark spot, which spread so rapidly as *to involve the parts affected in one mass of rottenness and putridity!* Both extremities of the alimentary canal were not attacked at the same time, but its progress having been arrested at the vulva, the mortification commenced afterwards in the mouth.

"Diarrhœa always attended these cases to their close, although in many cases without mortification, but not commonly without the loss of one or both eyes previous to death. In the progress of the case, a pearl-white speck made its appearance on the cornea, commonly on the under side, at its junction with the

sclerotica, spread over half the pupil, penetrated and left the iris protruding. All the children were more or less under endemic influence; a child was bled for pleurisy, in three days it mortified; two others were bled who labored under febrile excitement, and mortification set in soon after; the ophthalmia could not be treated in the ordinary manner without certain loss of the eyes from rapid ulceration of the cornea. During the prevalence of the endemic, we had occasional cases of scarlet fever, all of which followed the same course, and terminated fatally."

This description shows that the disease was *scurvy*, precisely similar to that which occurs on ship-board, and which prevailed a few years since, at the Millbank Penitentiary, in London, where the diet was very much the same, viz., *beef-water* (*soup*), of which the prisoners had the generous allowance of a quantity equivalent to one ounce and a quarter of beef daily, and bread. (See New York Journ. Med. and Collat. Sci., vol. i., p. 252). It was to this diet, it will be recollected, that the Royal College of Physicians ascribed the disease.

Though the diet of the establishment at the Long Island Farms is vastly improved, the effects of which are most gratifying, there is still room for further improvement. Instead of the thin slops, called "tea and coffee," at breakfast, milk should be furnished, in quantity sufficient to allow each child *one pint*, with bread of a wholesome quality, baked the preceding day, or with boiled rice, or Indian, which would be equally nutritious and healthy. It would be still better could they be alternated —bread, rice, Indian—this would furnish a very agreeable variety, and contribute much to the health of the inmates. That there is room for further reform is evident from the following abstract of the Report of Dr. Morrell, of "Diseases Treated in the Children's Hospital from July 1st, 1842, to May 8th, 1843," to the Common Council:

| | | | | |
|---|---|---|---|---|
| Of Ophthalmia | cases | 490 | vision impaired in one eye, . . | 2 |
| Scarlet fever | " | 20 | of whom died, . . . . | 0 |
| Consumption, | " | 13 | " . . . . . | 13 |
| Dysentery, | " | 115 | " . . . . . | 5 |
| Enteritis, | " | 8 | " . . . . . | 2 |
| Diarrhœa, | " | 75 | " . . . . . | 4 |
| Cachexia, | " | 12 | " . . . . . | 1 |
| Erysipelas, | " | 1 | " . . . . . | 1 |
| Peripneumony, | " | 8 | " . . . . . | 4 |
| Scrofula, | " | 40 | " . . . . . | 5 |
| Whooping-cough, | " | 84 | " . . . . . | 1 |
| Fever, | " | 22 | " . . . . . | 4 |
| Measles, | " | 312 | " . . . . . | 52 |
| Mortification, | " | 4 | " . . . . . | 4 |
| Putrid Fever, | " | 1 | " . . . . . | 1 |
| Total, | | 1212 | Total deaths, | 103 |

The whole number of children at the establishment, is not stated, but they have usually ranged, in former years, from 500 to 800. This is probably about the present number. This is certainly a large amount of sickness for such a number of inmates, but the proportion of deaths is not as great as we should have expected, from the extent of disease and the number attacked. Dr. M. states, in explanation of the great mortality of measles, that when "the children are attacked on the Farms, they come immediately to the hospital, and that all the feeble subjects, who have been sick from diarrhœa, dysentery, fever, scrofula, or whooping-

cough, take the measles immediately and die." Now, most of these affections are owing, confessedly, to innutritious and improper diet, in connection with bad air, and therefore the mortality may, in a great degree, be referred to this cause. Four hundred and ninety cases of ophthalmia, 40 of scrofula, 75 of diarrhœa, 115 of dysentery, &c., show that there is still something wrong, that needs correction. Dr. Whiting, the late talented physician of the Bellevue Hospital, speaking of these children in his Report to the Common Council, says :—" The greater portion of them have scrofulous constitutions, the only inheritance they have received from their parents, who in turn inherit it from poverty and wretchedness." (*Rep. Doc.*, No. 119, p. 1400.)

Now, the most successful mode of eradicating such an affection, is a judicious system of diet. Without this, no medicine is of the least avail.

In the treatment of disease, a suitable choice of diet has always been considered as of the highest importance. Accordingly we find that the subject of *Dietetics* occupies a considerable space in almost every treatise on the Materia Medica. Among the ancients, this department of the healing art occupied a higher rank in public estimation than even at the present time; and of those who wrote extended treatises on the subject of Food and Diet, may be mentioned the names of *Hippocrates*,* *Celsus*,† *Diascorides*,‡ *Galen*,§ *Oribasius*,‖ *Aetius*,¶ *Rhases*,** *Avicenna*,†† *Averrhoes*, &c.

It is a remark of Hippocrates, which has been copied by Aristotle, Galen, and others, that "the stomach is to animals what the earth is to vegetables;" and Galen seriously admonishes his readers "not to eat thoughtlessly, like brute beasts, but to consider attentively what kinds of food and drink they find from experience to be prejudicial to them." (*De Sanitate tuendâ, Lib.* vi., 13.) "A good physician," says Atheneus, "ought to be a good cook." A modern writer has pronounced the art of cookery to be a branch of *organic chemistry!* As Mr. Pereira has offered some highly judicious remarks on the subject of Dietaries for the sick, I shall present his views as embracing the material facts, and then give an abstract of the Dietaries of the Principal London Hospitals. "In no diseases," says Mr. P.," is attention to diet more necessary than in non-febrile disorders of the digestive and urinary organs. For in acute maladies, in which abstinence or low diet is requisite, there is usually no disposition to take food; on the contrary, solids of all kinds are generally loathed; and in such cases, therefore, there is little or no chance of any error of diet being committed. Dietetical regimen is more important in chronic diseases of the assimilating organs, in which the appetite is unimpaired, or even increases, since in such the patient is never apt to overstep the bounds of prudence by the employment of a diet improper, either from the quantity or quality of the food used. In chronic local diseases, when the constitution is unimpaired, and the appetite for food remains natural, I would by no means advocate the adoption of a spare or low diet; since I believe that in such cases the indulgence of a moderate appetite for plain food is attended with beneficial results. From this statement, however, maladies affecting the organs of assimilation must be frequently excepted. "Natural instincts," justly observes Dr. Billings,

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* De Diæta, de Affectionibus et alibi. † Lib. II. ‡ Mater. Med., Lib. II.
§ De Facult. Aliment., et de Probis, pravisque Aliment. ‖ Med. Collect., Lib. I.
¶ Lib. II. ** Ad Mansor., Lib. III. †† Cautic., p. 2.

"are too often thwarted; it is much too common to put patients empirically on low diet; and patients of the higher classes—the better educated—very often put themselves on low diet unnecessarily, so far as we may take natural instinct for a guide." He further observes, "we may assert that when a patient *can* eat, he may be allowed to do so; for if he has even a slight degree of fever, he *cannot* eat." (*First Principles of Medicine.*)

Dr. Pereira has described eight different kinds or grades of dietetical regimen, employed in the treatment of diseases, which he divides as follows:

"1. Full, Common, or Meat Diet.—On many occasions where it is desirable to restore or support the powers of the system, patients are permitted to satisfy their appetite for plain vegetable and animal food. In many indolent diseases, in scrofula, in some affections of the nervous system (as chorea and epilepsy), and in the stage of convalescence after acute maladies, &c., this kind of diet is frequently directed. In these cases, beer and, sometimes, wine are permitted; and spirit is occasionally required. In some diseases of, and in accidents occurring in, confirmed drunkards, it is frequently found injurious to withhold the stimulus to which the patient's system has been long accustomed; and thus, wine, brandy, rum, or gin, is ordered, according to circumstances.

"2. Animal Diet.—This term is applied to a diet composed of animal food, either exclusively or principally. The only disease, in which a diet *exclusively* of animal food is recommended, is diabetes. In this malady, strict abstinence from vegetable substances is attended with the diminution of both the quantity, and the saccharine condition, of the urine. But it deserves especial notice that the amount, as well as the nature, of the food taken in this disease, requires carefully attending to, as the craving for food is sometimes apt to induce the patient to indulge to an injurious extent.

"A considerable variety of food is necessary for patients limited to the exclusive use of animal diet, on account of the loathing of the same substance if frequently repeated. *Butcher's-meat*, *bacon*, *poultry*, *game*, *fish*, *shell-fish*, *cheese*, *eggs*, *sausages*, and *brawn*, are allowed in private practice. For common drink, *water*, *beef-tea*, or *mutton-broth*, may be sparingly used. *Milk* is generally permitted, but, as it contains *sugar*, its use is not unobjectionable.

"By the use of animal food exclusively, the quantity of sugar in the urine of diabetic patients is greatly reduced; but I have never seen this secretion entirely lose its saccharine condition by even the most rigorous adoption of animal diet. In one case, recently under my care in the London Hospital, the quantity of urine passed in twenty-four hours was reduced from about eleven to three or four pints in the twenty-four hours; but its specific gravity (1040 to 1045) and saccharine quality remained unaltered. From whence, it may be asked, in such cases, is the sugar derived? Where the use of milk is permitted, this, perhaps, is in part the source of it. I have, however, found it where neither milk nor vegetable food was employed; and, in such cases, the substances which were used as food, and from which sweet or saccharine matter is known to be obtainable, were gelatine and oil or fat. But neither the sugar of gelatine (*glycicoll*) nor the sweet principle of oils and fats (*glycerine*) is identical with the diabetic sugar (*glucose*); and we are unacquainted with any means of converting the two former into the latter substance.

"Patients, we are told, sometimes evince such an inordinate craving for vegetable food, that it is difficult, if not impossible, to persevere for any considerable length of time on an exclusively animal diet. In the cases which have fallen under my observation this has not been the case. I have several times met with patients who have objected to persevere with this diet, not on the above ground, but simply because they became satisfied of its inefficacy; the diminution in the quantity of urine not being attended with a corresponding relief of the constitutional symptoms.

"In those diabetic cases in which it is thought advisable to permit a limited

quantity of vegetable food, in conjunction with animal diet, those vegetables should be selected which are most highly nitrogenized, and which are freest from sugar or substances capable of being converted into saccharine matter, as the starchy bodies. These conditions are the best fulfilled by the cruciferous plants,—as *cabbage*, *greens*, *cauliflower*, *broccoli*, *watercress*, and *mustard* and *cress*. *Sauerkraut*, or fermented cabbage (see p. 184), is sometimes permitted. The *aromatic condiments* (as sage, mint, marjoram, fennel, parsley, caraway, cinnamon, nutmegs, allspice, pepper, mustard, &c.) are, of course, unobjectionable, as far as sugar is concerned. *Fruits*, especially apples and pears, are highly objectionable, on account of the saccharine and amylaceous matters which they usually contain. For drink, Dr. Prout recommends sound *porter* in preference to wine or spirits.

"Some practitioners, among whom Dr. Prout deserves to be especially mentioned, object to the exclusive use of animal food in diabetes; "but consider a certain proportion of *farinaceous* matters proper. The recommendation of this admixture of farinaceous matters is founded upon a fact already alluded to, and apparently well established, viz., that the assimilation of the saccharine principle is one of the last functions that becomes extinct in animals. The proportions of these two forms of aliment must be varied according to the circumstances of the patient; and particularly according to the degree in which he is able to assimilate albuminous, in preference to farinaceous, matters; a point not difficult to be determined by a little attention. Of farinaceous matters, *high* or *strong*, as the farina of wheat in the shape of bread, &c., seem to be most easily assimilated. The *low* kinds of farinaceous matters, as arrow-root, potatoes, &c. (with the exception, perhaps, of rice), seem to be reduced to a species of sugar, more difficult of assimilation than the sugar from wheat-flour, &c., and, in general, therefore, should be avoided.*

"*Gluten* is a nutritious vegetable principle, to the employment of which, in diabetes, no objection can be raised; and I have already (see p. 150) had occasion to notice *gluten bread*, which has been made for the use of diabetic patients.

"3. Vegetable Diet.—The exclusive employment of vegetable food, in conjunction with the use of distilled water, has been recommended by Dr. Lambe† as a remedy for cancer, scrofula, consumption, asthma, and other chronic diseases; but he has, I suspect, gained few, if any, proselytes to his opinions and practice.

"4. Spare or Abstemious Diet.—The term *spare* or *abstemious diet* is sometimes used to indicate the employment of vegetable substances principally, (not exclusively). It generally includes the use of the white-fish (the flesh of which is less nourishing and stimulating than butchers' meat, see p. 134), sometimes alternating with a limited quantity of poultry or butchers' meat. In plethoric habits, where the appetite is unimpaired, this diet is ordered in cases of threatened apoplexy, gout, &c. By its adoption we diminish the quantity of nutritive matter supplied to the system, while we keep the digestive organs actively employed.

"5. Fever Diet, (*Thin Diet; Spoon Diet; Slops*).—'In febrile diathesis,' says Dr. Beaumont,‡ 'very little or no gastric juice is secreted. Hence the importance of withholding food from the stomach in febrile complaints. It can afford no nourishment, but is actually a source of irritation to that organ; and, consequently, to the whole system.' In another place§ the same author observes, 'that drinks received are immediately absorbed, or otherwise disposed of, none

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* On the Nature and Treatment of Stomach and Urinary Diseases, p. 41. London: 1840.

† Reports of the Effects of a Peculiar Regimen on Scirrhous Tumors and Cancerous Ulcers. London: 1809. Additional Reports on the Effects of a Peculiar Regimen in cases of Cancer, Scrofula, Consumption, Asthma, and other Chronic Diseases. London: 1815.

‡ Experiments and Observations on the Gastric Juice, &c., p. 132.

§ Op. supra cit., p. 99.

remaining in the stomach ten minutes after being swallowed. Food taken in this condition of the stomach remains undigested for twenty-four or forty-eight hours or more, increasing the derangement of the whole alimentary canal, and aggravating the general symptoms of disease.'

"These observations suggest the appropriate diet for febrile states of the system. Foods which require digestion are to be withheld: indeed, they are generally loathed,—want of appetite being one of the early symptoms of fever. Aqueous drinks (commonly called diluents or slops), however, are rapidly absorbed without undergoing digestion. Tea, toast-water, and barley-water, therefore, may be taken *ad libitum*. Of the foods which are most admissible when the patient feels capable of taking them, the saccharine and the amylaceous are the lightest and most appropriate. Acidulous fruits and drinks sometimes prove most refreshing. Saccharine substances are absorbed, and pass into the chyle, and subsequently support the process of respiration, while amylaceous substances yield sugar in the stomach independently of the gastric juice, and probably by the aid of the saliva merely (see p. 62).

"6. Low Diet.—In acute inflammation of important organs, and after serious accidents, surgical operations, and parturition, patients in general are directed to adopt a low diet, consisting principally of liquid foods, as gruel, broth, milk, tea, and barley-water, and a moderate allowance of bread or biscuit, and light farinaceous puddings. The effect of low diet on the blood is similar to that of loss of blood; namely, a diminution of the number of the blood disks.*

"7. Milk Diet.—Besides cow's milk, which constitutes the principal article of food, this diet includes the use of farinaceous substances (such as arrowroot, sago, and tapioca), bread, and light puddings (of rice, bread, or batter). Milk is ordered when we are desirous of affording support to the system with the least possible stimulus or excitement. It is well adapted for inflammatory diseases of the chest (phthisis especially), of the alimentary canal, and of the bladder, when it is considered expedient to employ a nutritious, but not stimulating, diet. After hemorrhages, when the powers of the system have been greatly exhausted, a milk diet is frequently beneficial. It has also been considered one of the best means of preventing and of curing the gout. It is a good diet also for many of the diseases of children, especially those of a strumous or scrofulous nature. In some of the above-mentioned maladies, where the stomach is weak and irritable, cow's milk is apt to occasion vomiting and other unpleasant effects, in consequence of the butter which it contains. In such cases, skim-milk or ass's milk may be advantageously substituted.

"8. Dry Diet.—In several maladies it becomes necessary to restrict the quantity of liquids used: as in valvular disease of the heart, aortic aneurism, diabetes, and diuresis with either excess or deficiency of urea. The first of these diseases is incurable, and, therefore, our object is its palliation. One mode of attempting this is, to relieve the obstructed circulation by lessening the volume of blood; and which may be in some degree effected by limiting the amount of drink. In aneurism of the aorta we endeavor to lessen the tension of, and to promote the deposition of fibrine within, the sac. The indications are in part fulfilled by a dry diet, by which fulness of vessels and thinness of the blood are lessened. In diabetes, and also in diuresis, with either excess or deficiency of urea, a most important part of the treatment is to diminish, as much as possible, the quantity of fluids taken."

"I have said nothing of the nature of the solid food which is used by those who adopt a dry diet; because it is subject to considerable variation. In some cases a generous, in others a spare, diet should accompany it.

"Subjoined are the diet-tables of the *Metropolitan Hospitals for the Sick*,† of

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* See Andral and Gavarret's *Récherches sur les Modifications de Proportion de quelques principes du Sang*. Paris, 1842.

† "In addition to the substances specified in the following Diet Tables of the Metropolitan Hospitals, other articles (as chops, steaks, fish, wine, spirit, porter, &c.), are permitted, when specially ordered by the medical officers. These are denominated *extras*.

the *Royal Ordnance Hospitals*, and of the *Royal Navy Hospitals and Marine Infirmaries* :—*

"1. LONDON HOSPITAL.

| | Common Diet. | Middle Diet. | Low Diet. | Milk Diet. |
|---|---|---|---|---|
| *Per Day* . . | 12 oz. Bread.<br>1 pint Porter, *Men.*<br>½ pint do. *Women.* | | 8 oz. Bread. | 12 oz. Bread. |
| *Breakfast* . | Gruel. | | Gruel. | Gruel. |
| *Dinner* . . | 8 oz. Beef, with Potatoes, thrice a week.<br>8 oz. Mutton, with Potatoes, twice a week.<br>8 oz. Potatoes, and Soup, with Vegetables, twice a week. | The same, except that 4 oz. of Meat shall be given instead of 8 oz. | Broth. | 1 pint Milk. |
| *Supper* . . | 1 pint of Broth. | | Gruel or Broth. | 1 pint Milk. |

"2. ST. BARTHOLOMEW'S HOSPITAL.

| | Common Diet. | Broth Diet. | Thin or Fever Diet. | Milk Diet. |
|---|---|---|---|---|
| *Daily* | Milk Porridge.<br>12 oz. Bread.<br>6 oz. Mutton or Beef.<br>1 pint Broth [with Peas or Potatoes, 4 times a week.]<br>2 pints Beer, *Men.*<br>1 pint do. *Women.*<br>1 oz. Butter, twice a week. | Milk Porridge.<br>12 oz. Bread.<br>2 pints Broth.<br>1 pint Beer.<br>1 oz. Butter. | Milk Porridge.<br>12 oz. Bread.<br>1 pint of Milk, with Tapioca, Arrowroot, Sago or Rice, as may be prescribed.<br>Barley-water. | Milk Porridge.<br>12 oz. Bread.<br>2 pints Milk, with Tapioca, Arrowroot, Sago, or Rice, as may be prescribed.<br>Barley-water.<br>1 oz. Butter.<br>Bread Pudding, 3 times a week, when ordered. |

"3. GUY'S HOSPITAL.

| | Full Diet. | Middle Diet. | Low Diet. | Milk Diet. | Fever Diet. |
|---|---|---|---|---|---|
| *Daily* | 14 oz. Bread.<br>1½ oz. Butter.<br>1 qu'rt Table Beer.<br>8 oz. Meat when dressed. | 12 oz. Bread.<br>1½ oz. Butter.<br>1 pint Table Beer.<br>4 oz. Meat, when dressed, and ½ pint Broth. | 12 oz. Bread.<br>1 oz. Butter.<br>Tea and Sugar. | 12 oz. Bread.<br>1 oz. Butter.<br>2 pints Milk. | 6 oz. Bread.<br>1 oz. Butter.<br>Tea and Sugar. |
| | Half a pound of Beef (for Beef-tea), or Arrowroot or Sago, when ordered. | | | | |

For each diet, Gruel or Barley-water, as required.

"4. ST. GEORGE'S HOSPITAL.

| | Extra Diet. | Ordinary Diet. | Fish Diet. | Fever Diet. | Broth Diet. | Milk Diet. |
|---|---|---|---|---|---|---|
| *Daily* . . | 12 oz. Bread. *Men.*<br>2 pints Beer. *Women.*<br>1½ pts. Beer. | 12 oz. Bread.<br>1 pint Beer. | 12 oz. Bread. | 12 oz. Bread.<br>Barley-water *ad libitum.* | 12oz. Bread. | 12oz. Bread. |
| *Breakfast* | 1 pint Tea.<br>¼ pint Milk. | 1 pint Tea.<br>¼ pint Milk. | 1 pint Tea.<br>¼ pint Milk. | 1 pint Tea.<br>¼ pint Milk. | 1 pint Tea.<br>¼ pint Milk. | 1 pint Tea.<br>¼ pint Milk. |
| *Dinner* . . | 12 oz. Meat, roasted (weighed with the bone before it is dressed), four days,—boiled three days. ½ lb. Potatoes. | One half the meat allowed for extra diet.<br>½ lb. Potatoes. | 4 oz. of plain boiled white fish (as Whiting, Plaice, Flounders, or Haddock). | Arrowroot, &c., must be specially directed. | 1 pt. Broth.<br>6 oz. light Pudding. | 1½ pints Rice Milk four days.<br>½ lb. Bread or Rice Pudding three days. |
| *Supper* . . | 1 pint Gruel.<br>¼ pint Milk. | 1 pint Gruel.<br>¼ pint Milk. | 1 pint Gruel.<br>¼ pint Milk. | 1 pint Tea.<br>¼ pint Milk. | 1 pt. Gruel.<br>¼ pt. Milk. | ¼ pint Milk. |

* The two latter are omitted in this article.—L.

"5. ST. THOMAS'S HOSPITAL.

| | Full Diet. | Milk Diet. | Dry Diet. | Fever Diet. |
|---|---|---|---|---|
| *Daily* | 2 pints of Beer; 14 oz. of Bread. | 12 oz. of Bread. | 14 oz. of Bread; 2 pints of Beer. | 12 oz. of Bread; 2 pints of Beer. |
| *Breakfast* | Water Gruel. | 1 pint of Milk. | Water Gruel. | Water Gruel. |
| *Dinner* | ½ pound of Beef, when dressed, twice a week; 4 oz. of Butter, or 6 oz. of Cheese, thrice a week; ½ lb. of Mutton, when boiled, thrice a week. | 1 pint of Milk 4 times a week. Rice Pudding thrice a week. | 4 oz. of Butter, four times a week; Rice Pudding and 4 oz. of Butter, three times a week. | ½ of a lb. of Beef for tea. |
| *Supper* | 1 pint Broth, four times a week. | 1 pint of Milk. | | |

"6. WESTMINSTER HOSPITAL.

| | Full Diet | Middle Diet. | Low Diet. | | Spoon, or Fever Diet. | Incurables' Diet. |
|---|---|---|---|---|---|---|
| | | | *Fixed.* | *Casual.* | | |
| *Daily* | 14 oz. Bread. | 10 oz. Bread. | ½ lb. Bread. | — | ½ lb. Bread. | ½ lb. Bread.<br>½ lb. Meat.<br>½ lb. Potatoes.<br>½ pint Milk.<br>1 pint Porter. |
| *Breakfast* | 1 pint Milk Porridge or Rice Gruel. | 1 pint Milk Porridge, or thin Gruel. | 1 pint Tea, with Sugar and Milk. | — | 1 pint Tea, with Sugar and Milk. | |
| *Dinner* | ½ lb. Meat roasted, boiled, or chops.<br>½ lb. of Potatoes. | ½ lb. Meat roasted, boiled, or chops.<br>½ lb. of Potatoes. | No fixed diet for dinner. | 1 pint of Broth, or ½ lb. of Bread or Rice Pudding, or 1 pint Beef Tea, or a Chop, or Fish. | Barley-water. | |
| *Supper* | 1 pint Milk Porridge, or Rice Gruel. | 1 pint Milk Porridge, or thin Gruel. | 1 pint Tea, with Sugar and Milk. | — | 1 pint Tea, with Sugar and Milk. | |

"7. MIDDLESEX HOSPITAL.

| | Dieta Carnis, or Meat Diet. | Dieta Juscull, or Soup Diet. | Dieta Lactis, or Milk Diet. | Dieta Simplex, or Simple Diet. | Cancer Diet. |
|---|---|---|---|---|---|
| *Daily* | 12 oz. Bread. | 12 oz. Bread. | 12 oz. Bread. | 6 oz. Bread. | 12 oz. Bread.<br>½ lb. Meat.<br>½ lb. Potatoes.<br>1 pint Milk. |
| *Breakfast* | 1 pint Milk. | 1 pint Milk. | 1 pint Milk. | 1 pint Barley-water. | |
| *Dinner* | *Physicians' Patients.*<br>½ lb. Potatoes, 4 oz. dressed meat (Beef or Mutton), roast and boiled alternately, 4 days.<br>4 oz. Meat in Soup 3 days.<br>*Surgeons' Patients.*<br>¾ lb. Potatoes, 4 oz. dressed meat (Beef or Mutton), roast and boiled alternately. | 1 pint Soup, made with 4 oz. Beef, alternately with 1 pint of Broth with Barley. | ½ pint Milk, with Rice Pudding 4 days, and with Batter Pudding 3 days. | 1 pint Gruel. | |
| *Supper* | 1 pint Gruel alternately, with 1 pint of Barley-water. | 1 pint Gruel. | ½ pint Milk, or 1 pint of Gruel. | 1 pint of Gruel or Barley-water. | |

"8. KING'S COLLEGE HOSPITAL.

| | Full Diet. | Middle Diet. | Milk Diet. | Low Diet. | Fever Diet. |
|---|---|---|---|---|---|
| *Daily* | 1 pint Beer, or ½ pint Porter. 14 oz. Bread. | 14 oz. Bread. | 1 lb. Bread. | 8 oz. Bread. | — |
| *Breakfast* | 1 pint Milk Porridge. | 1 pint Milk Porridge. | 1 pint Milk. | 1 pint Gruel. | 1 pint Gruel. |
| *Dinner* | ½ lb. Meat. ½ lb. Potatoes. | ½ lb. Meat. ½ lb. Potatoes. | 1 pint Milk. | 1 pint Broth. | 2 pints Barley Water. |
| *Supper* | 1 pint Milk Porridge. | 1 pint Milk Porridge. | 1 pint Gruel. | 1 pint Milk Porridge. | 1 pint Milk Porridge. |

"9. DREADNOUGHT HOSPITAL SHIP.

| | Full Diet. | Ordinary Diet. | Low Diet. | Milk Diet. | Fever Diet. |
|---|---|---|---|---|---|
| *Breakfast* | 1 pint Tea. 1 lb. Bread. | Ditto. Ditto. | Ditto. ½ lb. Bread. | Ditto. 1 lb. Bread. | Ditto. |
| *Dinner* | ½ lb. Meat. ½ lb. Potatoes. 2 pints Beer, (if ordered). | ½ lb. Meat. ½ lb. Potatoes. 1 pint Beer (if ordered). | 1 pint of Beef Tea. | 1 pint Milk. | Gruel. |
| *Supper* | 1 pint Broth. | 1 pint Broth or Gruel. | 1 pint Gruel or Milk (if ordered). | 1 pint Milk. | Gruel or Barley-water. |

"10. NORTH LONDON HOSPITAL.

| | Full Diet. | Middle Diet. | Low Diet. | Milk Diet. |
|---|---|---|---|---|
| *Daily* | 16 oz. Bread. ½ pint Milk. ½ lb. Meat and ½ lb. Potatoes, 4 days. 1 pint Soup or Rice three days. | 16 oz. Bread. ½ pint Milk. 1 pint Soup or Rice. | 8 oz. Bread. ½ pint Milk. Oatmeal for Gruel. | 17 oz. Bread. 2 pints Milk. |

"Dr. Carpenter* observes that 'there can be little doubt that, as a whole, the diet of patients in English hospitals is much too high, being far better than that to which the same class of persons is accustomed in health: this is attended with injury to the patients, and with increased expense to the institution; and it has further the injurious effect of tempting the patients to stay in the hospital for a longer time than is necessary.'

"Taking the dietaries of the metropolitan hospitals as fair samples of those of the English hospitals generally, I am quite willing to admit that the full diet of these establishments is, in many cases, 'better than that to which the same class of persons is accustomed in health;' but I by no means agree with Dr. Carpenter in his sweeping assertion that it is 'much too high.' That life may be supported on a more restricted diet cannot be denied; but I agree with the Rev. Mr. Porteus, in his letter† to the citizens of Glasgow, that 'it is a difficult matter to ascertain what is necessary to preserve life,' and that 'wherever the starving point lies, the managers of charity funds should endeavor to be above it.'

"In framing dietaries for the public hospitals, it is necessary to adapt them to the wants of the average of the patients. No diet scale can be formed which will not be open to objection in individual cases; but I contend, as a whole, the

* *Principles of Human Physiology*, p. 384.

† See Mr. Mott's report, in *The Second Annual Report of the Poor Law Commissioners.*

dietaries of the metropolitan hospitals are unobjectionable. To take the hospital (London Hospital, Mile End), with which I am connected, as an example, I may observe, that it is much more common to hear the patients complain of the insufficiency, than of the superabundance, of its full diet. Many of them are strong, healthy men, as sailors, accustomed to eat heartily, and who have received some accident which has led to their admission into the hospital. Others are convalescents from long and lingering illnesses, with depressed vital powers, which require, not merely to be maintained, but to be renovated or raised to the healthy standard. The rations allowed are not, in general, greater, but oftentimes less, than can be eaten with appetite; but should, in any particular case, the quantity served out be more than is requisite, it is the duty of the medical officer to place such patient on a more limited diet.

"The objection raised by Dr. Carpenter to the diet of the English hospitals, that it has 'the injurious effect of tempting the patients to stay in the hospital for a longer time than is necessary,' would be valid, if these establishments were compelled to retain the patients as long as they are disposed to stay; but such is not the case. They are discharged by the surgeon or physician, under whose care they have been placed, as soon as their state of health permits this to be done with safety."*

Remarks.—It is evident that no general rules can be laid down for the dietetical management of particular diseases, which are not liable to numerous exceptions, depending on age, sex, temperament, and previous habits of living, as well as the pathological condition of the different organs. The doctrines of Broussais, which a few years since prevailed to a very great extent among the practitioners of this country, have exerted a very decided influence in the dietetical treatment of all disorders of the digestive organs, especially of the gastro-enteritic surfaces; and if they have tended to correct the evil of a too liberal indulgence of food in such affections, there is reason also to believe that they have, in many instances, been productive of injury, by leading to such a diminution in the quantity of aliment, as is insufficient for the necessary wants of the system. It seems, for example, to be generally admitted, that demulcent, mucilaginous, and farinaceous substances, are the only articles proper to be administered in such cases, especially in cholera infantum; whereas it is very doubtful whether they are as well adapted for the treatment of many of these cases as a preparation of animal food. In the disease above mentioned, as well as some other analogous affections, a jelly prepared from the sounds of the cod, or Russia isinglass, or calves' feet, or even boiled salt pork, frequently answers better than any kind of farinaceous food, which passes the alimentary canal apparently undigested. The same is true in some forms of dyspepsia. This, however, is in accordance with the well-known fact, that animal food is of easier digestion than vegetable, as it requires less change to assimilate it to the wants of the system.†

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* Appendix, 22.

† Dr. Pereira truly remarks, that the "frequent occurrence of disease among Europeans, who reside in tropical countries, is probably in part owing to their continued employment of a dietetical system fitted for colder climates." It is one of the functions of the liver to eliminate carbon and hydrogen from the blood, in the form of cholesterine and resin of the bile, and we know that carbon is also separated from the blood in the lungs, and by the skin. It is given off by respiration combined with oxygen, but when separated by the liver, it is still in the oxydizable state. Tiedemann and Gmelin, as well as Autenreith and other physiologists, have directed attention to a vicarious action in the functions of the lungs and liver, respecting which

With respect to what Mr. Pereira calls "low diet," we are satisfied it is carried too far by many physicians in the treatment of disease, and that recoveries would be much more frequent and rapid under a more generous allowance of food. Where the stomach craves a more liberal and nourishing supply of food, it should generally be granted; but the *quality* is of the utmost importance. This is well illustrated by the following remark from one of Dr. Stoke's lectures. Speaking of the causes

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Muller remarks, that "although it does not appear that the size of the liver is, throughout the animal kingdom, in the inverse ratio of the size of the respiratory organs, yet pathological observations are certainly in favor of the existence of such a relation." Carbonic acid is also separated in connection with lactic acid, lactate of ammonia, and muriate of ammonia, from the skin.

Dr. Crawford proved by experiment, that less carbonic acid was evolved in proportion to the height of the temperature; and it is fully established that the function of the lungs is rendered inefficient by the rarefaction of the air by the heat. Supposing the function of the skin to remain the same, it is evident that there must be an increased excretion of the carbon from the liver, to preserve the blood in that state of purity which is compatible with the due preservation of health. Accordingly Tiedemann and Gmelin maintain that the increased secretion of bile in tropical countries is required to compensate for the diminished purification of blood in the lungs.

Dr. Edwards also found that less carbonic acid was evolved in summer than in winter; and Dr. Prout and Dr. Fyfe found that the quantity of the same was diminished by *vegetable diet*.

These, however, are but part of the facts connected with this subject. The state of the dew-point, or the hygrometric condition of the air, has an immense influence upon the quantity of carbonic acid eliminated both from the skin and lungs. From some experiments which we instituted several months since, we satisfied ourselves that this condition of the atmosphere has far more to do in effecting changes in the relative proportions of the various constituents of the blood, and hence in the promotion of health, or the causation of disease, than the temperature, to which so much has been attributed. When the air is nearly saturated with moisture, causing that kind of weather called *close* or *sultry*, there is a languor of the mind, a debility of the muscular system, together with a duskiness of the skin, which proves that the blood is not properly decarbonized and oxygenated. These effects may be illustrated by the influence of the *Sirocco*, which is an excessively damp wind, or, in other words, a wind with a high dew-point.

It required but a single step to connect these facts with the production of disease in tropical climates, especially affections of the liver and abdominal organs. That there was something more than high temperature, or what is vaguely termed *malaria*, involved in their causation, was very evident; for in addition to a multitude of other facts which might be mentioned, Mr. Stevens states that in the West Indies the inhabitants of the smallest islands, which are the driest and hottest, are not subject to diseases of the liver and increased secretion of bile. Mr. Hopkins has endeavored to identify *malaria* with a high *dew-point*, but they are essentially distinct. No one can doubt the existence in some localities of a poisonous miasm in the atmosphere, which gives rise to disease. A high dew-point, or an atmosphere saturated with moisture, doubtless gives efficiency to this agent by checking its elimination from the system, but it acts chiefly by preventing the separation of carbon by cutaneous and pulmonary transpiration, thus throwing double duty upon the liver, and often greater than it can duly discharge. Hence arise congestions of this organ, and of the abdominal viscera, whose venous blood it receives; and hence follow dysenteries, cholera-morbus, fevers, and a long catalogue of tropical diseases.

We now see the importance, in tropical climates, of cutting off animal food, which abounds in carbon, and living upon a moderate allowance of mild vegetable diet. We know several persons who have resided for many years, on the most sickly portions of the African coast, in the enjoyment of perfect health, by confining themselves to vegetable food, chiefly rice, and avoiding alcoholic liquors. Gen. Sheldon, of Massachusetts, a vegetable-eater, lived several years in the most sickly parts of the Southern United States, with an entire immunity from disease, and he states, that in his opinion, man may enjoy perfect health in any locality, provided his dietetic and other habits are correct.

of relapse, in convalescence from fevers, he observes :—"In some cases, indigestible matters of a cold nature, such as some of the *cucurbitaceæ* and *brassicæ*, produce a directly prostrating and really poisonous effect on gastro-intestinal nervous expansion, which is transmitted to the brain, and is followed by insensibility, coldness of the surface, small and almost extinct pulse." I have recently known an apoplectic state of the brain, which proved speedily fatal, brought on in a child five years of age, convalescing from scarlet fever, by eating freely of broiled ham, and such instances are by no means unfrequent; and yet this child might have ate with impunity (in moderation) rice or bread pudding, milk, soaked crackers, toasted bread, &c. One of the most distinguished physicians in a neighboring State, lately told me, that he generally permitted his patients to take their own course as to their diet; directing them to eat just such articles as they took a notion for, and nothing else, and that he rarely, if ever, knew any injury arise from such permission. At first, I thought this rather singular, but I could not dispute his word, for he was an honorable man; but at the same time I told him that I had such perverse, or peculiar patients to deal with, that if I allowed them the same privilege, half of them would kill themselves downright, by actual stuffing. I thought less, however, of this gentleman's opinion on this subject, when he told me that he treated dysentery with brandy, fevers with opium, wine, &c., and pneumonia with stimulants, and that he rarely, if ever, bled anybody for anything.

The importance of what Mr. Pereira calls "dry diet," is by no means appreciated in the treatment of certain forms of disease. Attention has been lately called to this subject by Dr. Williams, of London, in his work on "Diseases of the Chest." Speaking in relation to the treatment of colds, catarrhs, &c., he strongly recommends, from his own experience as well as its effects upon others, what he calls "*drying it up, by cutting off the supplies*"—that is, by withholding fluids in every shape, as much as possible. He was led to this treatment by observing the effects, in his own person, of drinking a quantity of tea or other diluents, it being invariably followed in the course of an hour, by an increased "stuffing in the head," and accompanying flow of scalding, irritating humor from the nose and eyes. The results of this practice, he states as follows :—"For twenty-four hours I did not take a drop of liquid of any kind, and to my agreeable surprise, not only did I escape these occasional aggravations of the complaint, but the stuffing and discharge began to show evident signs of abatement, and the handkerchief was in less continual requisition. I persevered for twenty-four hours more, and my cold was gone; there being only now and then a little gelatinous, opaque mucus collected in the nostrils and throat, without any stuffing or irritation, just as it takes place at the end of a cold. What was of still more consequence, no cough followed; the whole catarrhal disease seemed to have been destroyed." The physiological principle on which the dry method acts, is by diminishing the mass of the circulating fluids, thus lessening the partial plethora of the vessels supplying the morbid secretion from the affected membrane, which, no longer irritated by its own secretion, is soon restored to a healthy condition. The natural fluid secretions continue, although in diminished quantity; the urine is still excreted, although its watery part is diminished; and the skin continues to perspire either insensibly, or under the influence of increased warmth or exercise, in an obvious manner. If, however, liquid be freely taken too soon, be-

fore the membrane has lost its diseased action, the discharge will return, and the complaint will be as bad as ever. But if, after the discharge has been stopped by twenty-four or thirty-six hours of dry diet, means be taken to keep up the other secretions, as by exercise, with a warm state of the surface, a little liquid may be taken with impunity, the bulk of the circulating fluid being still below the point at which it can supply any amends from the irritation in the diseased membrane. I have found this treatment successful in my own practice in these cases, as well as in many kinds of congestion, hemorrhage, and local determinations of blood, where I wished to reduce plethora without diminishing strength; which is known to depend, in a great degree, on the proportion of fibrine and coloring particles in the blood. Care, however, is necessary that this treatment be not carried too far; the blood may be rendered too thick as well as too thin; and in the former case, excrementitious matters will be retained, which ought to be carried out of the system. In diseases of the heart, where the circulating fluid is too great, moderate dilution is a safe and useful substitute for blood-letting, which is usually practised; and the same is true in relation to the treatment of ascites, and other forms of dropsy, where we wish to get rid of the fluid by the increased absorption which we know is promoted by withholding fluids as well as by blood-letting. We throw out these hints as suggestive, rather than with the design of pointing out the cases to which this treatment is applicable, which, after all, must be left to the judgment of each practitioner.

In carrying out the *dry treatment*, however, it is very necessary to pay particular attention to the diet, as well as other circumstances. In catarrh, this treatment succeeds best in the early irritative stage, when the irritation is confined to the nasal and pituitary membrane. If fever be present, a cathartic followed by antimonials will be very proper, as tending to promote that free state of the secretions, on which the success of the dry plan depends. The solid food should not be of a rich or heating kind, but consist of bread, soda crackers, rice, with a little butter; and in mild cases, white fish, gelatinous meats, light puddings, and dried fruits. Patients have no right to complain of such fare; for Dr. John Burdell ("Life of Cornaro") and Dr. Alcott, both tell us that they have drank no fluids for years, and yet enjoy the best of health. But then these gentlemen eat plenty of succulent fruits and vegetables. If they should find it necessary to resort to this treatment, all they have to do, is to cut off their fruits, &c., and take to dry crackers. Dr. Williams, in his last edition, remarks that he "has not changed the diet in any particular but in the point of abstinence from liquids; and although with regard to this point, total abstinence is, of course, the most effectual, I have found lately that a deviation to the amount of taking about a table spoonful of tea, or milk with breakfast and the evening meal, and a wine-glass full of water on going to bed, does not interfere with the process of the plan, and it certainly adds to one's comfort."

Forty-eight hours of abstinence will, according to Dr. Williams, in general, suffice to effect a cure in cases of colds and catarrh, and the treatment does not interfere with one's ordinary pursuits, nor does it require "nursing" or confinement to the house. The time, however, will vary in different individuals, according to the quantity of their circulating fluid, the activity of their secretions, and the intensity of the catarrhal disease. Something, also, will depend on the hygrometric state of the air. The period may be shortened by taking suitable measures to in-

crease the secretions, as exercise and warm clothing, lying warm in bed, or by purgative medicine.

DIETARY OF THE NEW YORK HOSPITAL.

*For dinner*, on *Tuesdays, Wednesdays, Thursdays, and Saturdays*, beef soup, with beef and potatoes and bread. On Mondays, Wednesdays, and Fridays, mutton soup, with mutton, potatoes, and bread. On Mondays, boiled rice, with one gill of molasses. For *breakfast and supper*, bread and black tea; 1 ounce of tea to every six, and a pint of milk to every eight patients.

REMARKS.—The above is the *general diet* of the patients at this establishment, including about two-thirds of the number. Special diet is directed by the attending physicians, and adapted to the circumstances of each particular case. Eggs, milk, oysters in their season, crackers, chickens, &c., are allowed, together with porter, wine, &c. About 78 quarts of milk are daily used, and about two dozen of eggs; 2 being allowed to a patient, when ordered. The number of chickens consumed, averages only about 2 daily. Little or no butter, and no cheese is allowed. 100 lbs. of beef are furnished three times weekly; and 100 lbs. of mutton, three days also. This will give but a half pound of meat daily, for six days in the week, without any allowance for waste. The following are the amounts of some of the articles of food annually used in the establishment, with their cost.

| | | | | | | |
|---|---|---|---|---|---|---|
| Beef, | 35,178 lbs. | $2,085.22 | Cheese, | 100 lbs. | 10.47 |
| Mutton, | 16,214 " | 763.56 | Molasses, | 734 gals. | 160.10 |
| Pork, | 2,181 " | 106.86 | Vinegar, | 7 bbls. | 22 75 |
| Poultry, | | 96.00 | Tea, | 1,510 lbs. | 747.33 |
| Fish, | | 81.00 | Sugar, | 12,636 " | 772.78 |
| Flour, | 397 barrels | 2,323.37 | Coffee, | 1,289 " | 147,25 |
| Meal, | 2,468 lbs. | 56.00 | Eggs, | | 38.49 |
| Rice, | 6,804 " | 210.35 | Milk, | 31,139 quarts | 1,481.75 |
| Crackers, | | 25.42 | Spices, | | 17.60 |
| Potatoes, | 1,008 bushels | 237.71 | Salt, | 18 sacks, | 37,42 |
| Vegetables, | | 62.81 | Yeast, | | 20.74 |
| Butter, | 3,028 lbs. | 485.05 | Liquors and Wines, | | 158.30 |
| Fruit, | | 61.54 | Porter, | 297 dozen | 184.75 |

The patients are allowed to eat *ad libitum*, within moderation. About one-third pay for their board, either in whole or in part; but in either case, their fare is the same, unless it is furnished from out of the house.*

I am not aware that there is much room for improvement in the dietary of this Hospital; the patients have an abundance of nutritious and palateable food, where circumstances do not forbid, and probably as good as would be furnished in an ordinary private boarding-house. As a general

* There is probably no institution in the United States, under better regulations in every respect, than that of the New York Hospital. During the year 1843, according to the Report of the Governors, 2,000 patients received the benefits of the Hospital during the year, of whom only 170 died, and 1,239 were cured. It is gratifying also, to learn from the same Report, that "the advantages to be derived from the practice of the Hospital, and attendance upon the clinical lectures, delivered by the eminent professional gentlemen connected with it, together with the use of the library, have attracted a greatly increased number of students from different parts of the State."—(P. 1.)

rule, I would agree with Mr. Carpenter, that patients who are laboring under slight diseases, the greater number of those under surgical treatment, and convalescents from acute diseases, should have a diet much like that of their ordinary food, but rather less in quantity. It is evidently impossible to lay down any fixed standard for all; as constitution, previous habits of living, present condition, &c., must greatly modify any system which might be laid down. If Cornaro, whose health had been broken down by excesses, lived 58 years on 12 ounces of food per day, and that chiefly vegetable, it by no means follows that every one can do the same. If respiration, circulation, secretion, and mental manifestations, could be reduced to the low condition which we observe in hybernating animals, it is very probable that we might live a long time without any food at all; but as long as we are characterized by any functional activity, and organic changes are going on, so long we shall have to eat, and the quantity will have to bear a ratio proportionate to this activity, and these molecular changes.

### DIETARY OF THE PENNSYLVANIA HOSPITAL.

I know not how I can give a better account of the dietary of this Hospital, than by publishing the following letter, kindly furnished me by Mr. Clapp, the excellent Steward of the institution. It will be seen that the plan of the English Hospitals is adopted, viz., dividing the diet into four grades; which undoubtedly facilitates the duties of the attending physician, if it cannot be so well adapted to the particular circumstances of the patient.

"*Pennsylvania Hospital*, 10*mo.* 31, 1843.

"Respected Friend:—Thy letter of September 8th, was not received till yesterday, from what cause I know not. I hardly know how to communicate the information respecting the dietetic system pursued in this institution, but I will endeavor to do so as well as possible.

"The ward prescription-books are ruled in three columns, one headed "shop prescriptions," one "ward prescriptions," and the third "diet." We keep also a *diet table* numbered 1, 2, 3, and 4; each patient's name is written in the margin of the ward-book, and in the columns opposite his name are his prescriptions and diet, either No. 1, 2, 3, or 4, marked simply in figures, or with one or more of the articles contained in the diet table under that figure. For instance, a patient is marked for diet No. 1; by referring to the table, the nurse finds No. 1 to consist of barley-water, gruel, arrow-root, sago, tapioca, and rice-water. No. 2 includes gruel, tea, bread, rice, molasses, mush, and vegetables. No. 3, bread, tea, rice, molasses, mush, soup, and vegetables. No. 4 is the regular house diet, and has, in addition, chocolate and meat. Soup is an every day dish. The meat is beef and mutton, either boiled or roasted, and sometimes veal and lamb. This is the ordinary diet of the patients.

"When specially ordered by the physician, the following articles are furnished, viz., coffee, eggs, fruit, butter, chicken, oysters, milk, &c., which is done in a book kept for the purpose.

"Accompanying this, I send our last annual Report. On page 4 will be found the total amount of provisions for one year, under the head of household expenses, and on page 12 will be found the average number of patients for the same time; but to this should be added the family and domestics, who number, altogether, thirty-five.

"If anything further can be furnished, please let me know, and I will do it with pleasure. "Respectfully,

"Dr. Lee. "Allen Clapp, *Stew'd, P. Hospital.*

"P. S. I may add that we have no particular diet for particular days.

"We use no bread in the institution but such as is made of the best superfine flour, and the meat is of the best quality."

Remarks.—It appears from the "Annual Report" accompanying this letter, that only 886 patients were treated in this hospital during the year 1843, and that the average number under treatment at any one time during the year was ninety-three, of whom twenty-six were pay, and sixty-seven poor, patients. As the number treated in the New York Hospital during the same period was 2,100, it exceeds that of the Pennsylvania Hospital by 1,214; the number of patients treated during the year being nearly three times as great in the former as in the latter.

The following are some of the items of provisions, with their cost.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Meat, 25,273 lbs. | cost | $1,261 | | Brought forward, | | 3,035 | 20 |
| Fish, | " | 99 | | Loaf Sugar, 55lbs. } Brown do., 5,619 lbs. } | " | 407 | |
| Poultry, | " | 167 | | Molasses, 384 galls. | " | 86 | |
| Eggs, | " | 114 | | Tea, 424 lbs. | " | 243 | |
| Butter, 2,348 lbs. | " | 411 | | Coffee, 874 lbs. | " | 88 | |
| Cheese, | " | 16 | | Chocolate, 625 lbs. | " | 95 | |
| Flour, 165 bbls. | " | 781 | | Fruit, | " | 42 | |
| Biscuit, | " | 51 | | Vegetables, | " | 67 | |
| Rice, 2,979 lbs. | " | 95 | | Beer and Cider, | " | 4 | 50 |
| Meal, | " | 7 | | Milk, 864 qrts. | " | 43 | |
| Salt, | " | 22 | | | | | |
| Vinegar, 32 galls. | " | 3 | 20 | | Total, | $4121 | 70 |
| | | $3,035 | 20 | | | | |

In comparing this with the list of provisions furnished the New York Hospital, it will be found that the latter furnishes a much more liberal allowance of milk than the former, in the ratio of 31,139 quarts (cost $1,481) to 864 (cost $43). The Philadelphians, however, are more liberal in poultry, butter, and eggs, which compensate, in a measure, for the want of milk; but then, again, New York goes ahead in the article of tea, in the ratio of 1,510lbs. to 424lbs. Again, while the Philadelphians have allowed their 886 patients but $4 50 worth of beer and cider, no wine, brandy or other liquors, the more generous New Yorkers have dealt out 297 dozen of porter (3,564 bottles) and $158 30 worth of wines and liquors. On the whole, if patients had their choice to make of the two institutions, and were governed solely by a regard for good living, if not tetotallers, they would doubtless prefer New York; but if they were, we suspect that the Pennsylvania butter, eggs, and poultry, would draw them that way.

### "7. Dietaries for the Insane.

"'I have selected the diet tables of Hanwell Lunatic Asylum, Bethlem Hospital, and St. Luke's Hospital,' says Mr. Pereira, 'as examples of the dietaries of public establishments for the reception of the insane.'

"It has been remarked by Dr. Conolly* that in the Lunatic Asylums, 'there are patients who require food in much greater proportion than others; there are also some whose restlessness at night seems to be allayed by food, although they do not complain of hunger. The capriciousness of some patients respecting food is only to be overcome by temporary indulgence and little extra allowances. Without this consideration a great amount of discontent will occasion-

* The Report of the Resident Physician of the Hanwell Lunatic Asylum, presented to the Court of Quarter Sessions for Middlesex, at the Michelmas Sessions, 1840.

ally prevail in the wards, particularly among the female patients; and attention to this point is to them more important than the application of medicine.'

"The same writer, in another place,* observes that the cases of refusal of food by insane persons are chiefly of two kinds:—'*one*, in which food is refused in consequence of some delusion, or some vow, or from mere obstinacy; the patient being in tolerable bodily health, or certainly not incapable of digesting food;—*another*, in which it is utterly repugnant to a stomach in a high state of disorder.'

"In the first description of cases, if all other means (such as varying the food, persuasion, &c.), 'tried with the utmost patience, fail, it is justifiable, and even necessary, to introduce food into the stomach by artificial means.' This is usually effected by the stomach-pump. 'In the second, the condition of the patient is entirely different. The tongue is red and thickly coated; the bowels are disordered; there is present a low kind of fever; the brain is highly excited, and the patient almost too feeble to stand or walk except by sudden and frantic efforts. His face is pale, the eyes are sunk, and wild in their expression; and the whole frame is emaciated to an extreme degree. All these are so many sure signs of death ensuing on long-continued disease of the brain, with all its complications. Nowhere except in a Lunatic Asylum would such signs of sinking life be recorded as the result of food being refused. The aversion to take food arises, in such cases, as in cases of fever, from the general and terrible disorder of the system; from a diseased condition of the stomach itself, among other organs, associated with a brain disturbed to excess. To force food into the enfeebled and dying stomach of such patients would not be sanctioned by any well-regulated hospital, or by any competent physician; and their distinction ought not to be overlooked because they occur in an hospital for the insane.'

"1. THE HANWELL LUNATIC ASYLUM.

| | | |
|---|---|---|
| *Breakfast* | *Males.*—Milk thickened with Oatmeal and Flour, 1 pint; Bread, 6 ounces. | |
| | *Females.*—Bread, 5 ounces; Butter, half an ounce; Sugar, 4 ounces per week; Tea, 1 pint. | |
| *Dinner* | Sunday | Meat, 5 ounces, cooked. |
| | Tuesday | Yeast Dumpling, 4 ounces. |
| | Wednesday | Beer, half a pint. |
| | Friday | Vegetables. |
| | Monday | 1 pint Soup. |
| | | Bread, 6 ounces. |
| | Thursday | Beer, half a pint. |
| | Saturday | Meat Pie Crust, 12 ounces. |
| | | " " Meat, 1½ ounces. |
| | | Beer, half a pint. |
| *Supper* | *Males.*—Bread, 6 ounces; Cheese, 2 ounces; Beer, half a pint. | |
| | *Females.*—Milk thickened with Oatmeal and Flour, 1 pint; Bread, 5 ounces. | |
| *Extras* | *To Workmen.*—Out-door Workers to be allowed half a pint of Beer at 11 o'clock, A.M., and at 4 P.M., daily; and one ounce of Tea and 4 ounces of Sugar per week. | |
| | *To Laundry Women, &c.*—Laundry Women to be allowed half a pint of Beer at 4 P.M., and, together with helpers, &c., 1 ounce of Tea and 4 ounces of Sugar per week, and in lieu of the ordinary supper. | |

* The Third Report of the Resident Physician of the County of Middlesex Pauper Lunatic Asylum at Hanwell, Oct. 1st, 1841.

"2. BETHLEM HOSPITAL.

| | | |
|---|---|---|
| *Breakfast* | | Gruel. |
| *Dinner* | Every day | Table Beer. |
| | Sunday | 8 ounces cooked Meat. |
| | Tuesday | 8 ounces Bread. |
| | Friday | Vegetables. |
| | Monday | Baked Batter Pudding. 4 ounces Bread. 1 ounce Cheese, or ½ ounce Butter. |
| | Wednesday | Pea Soup, with Legs and Shins of Beef; 8 ounces Bread. In the summer months, Baked Rice Pudding, 4 oz. Bread, 1 oz. Cheese, or ½ oz. Butter. |
| | Thursday | Boiled Suet Puddings, 4 oz. Bread, 1 oz. Cheese, or 1 oz. Butter. |
| | Saturday | Rice Milk, 8 oz. Bread, 2 oz. Cheese, or 1 oz. Butter. |
| *Supper* | | 8 ounces Bread, 2 ounces Cheese, or 1 ounce Butter. Table Beer. |
| *Extras* | *For the Sick* | Mutton Broth, Beef Tea, Puddings, Fish, Meat, Eggs, Wine, Strong Beer, &c. &c., or whatever may be ordered by the medical officer. |
| | *Christmas Day* | 8 oz. Roast Beef, 8 oz. Bread. (*Mem.*—If it fall on an ordinary Meat Day, the patients have a Meat Dinner on the following day.) A Mince Pie, 6d. |
| | *New Year's Day* | Plumb Puddings, in addition to the ordinary dinner. |
| | *Good Friday* | A Bunn, 1*d.* |
| | *Easter Monday* | 8 oz. Roast Veal, 8 oz. Bread, Vegetables. |
| | *Whit Monday* | 8 oz. Roast Veal, 8 oz. Bread, Vegetables. |

During the summer, about the month of August, 6 oz. Bread, Bacon, Beans, 8 oz. Bread, 1 oz. Butter; Fruit, consisting of Currants and Gooseberries.

In the month of October, Apple Pies, in addition to the ordinary dinner.

"3. ST. LUKE'S HOSPITAL.

| | | |
|---|---|---|
| *Breakfast* | | *Males.*—2 pints of Gruel, made of equal parts of Milk and Water, with 2 ounces of Bread. *Females.*—1½ pints of Gruel, with 2 ounces of Bread. |
| *Dinner* | Daily | *Males.*—1 pint Beer. *Females.*—½ pint Beer. |
| | Sunday | *Males.*—½ lb. cooked Meat; Vegetables; 6 ounces Bread. |
| | Tuesday | *Females.*—½ lb. cooked Meat; Vegetables; 6 ounces Bread. |
| | Thursday | |
| | Monday | *Males.*—2 pints Broth,* and 6 ounces of Bread. |
| | Friday | *Females.*—1½ pints Broth, and 6 ounces of Bread. |
| | Wednesday | *Males.*—1 pint Broth, 4 ounces Bread, ½ lb. Baked Suet Pudding. *Females.*—1 pint Broth, 4 ounces Bread, ½ lb. Pudding. |
| | Saturday | *Males.*—2 pints Rice Milk, or 1 lb. Baked Rice Pudding, and 6 ounces Bread. *Females.*—1½ pints Rice Milk, or ½ lb. Pudding, and 6 oz. Bread. |
| *Supper* | | 8 ounces Bread, and 2 ounces Cheese or Butter; or, on Wednesday, 1 pint Broth and 8 ounces Bread. *Males.*—1 pint Beer. *Females.*—½ pint of Beer. |

DIETARIES FOR THE INSANE IN THE UNITED STATES.

Much attention has been paid in this country to the effects of diet in

* The Broth is made of the liquor of the preceding day's meat, with peas, &c., and two stones of fresh meat for every fifty patients.

the treatment of insanity, and the results of experiments in different institutions show that a plentiful allowance of animal and vegetable food, of the most wholesome and digestible kind, is required. The adoption of a liberal diet is not only free, in such cases, from any exciting or too stimulant influence, but appears to calm the irritation which previously existed. These remarks are only intended to apply to a generality of chronic cases. Of course, no rules as to diet can be laid down, which are not subject to modification under particular circumstances, according to the peculiarities of the case and the state of the constitution. The great success of the late Dr. Todd, in the treatment of the insane at the Connecticut Retreat, at Hartford, was doubtless owing, in a great degree, to a highly nourishing diet, conjoined with a tonic course of medicine.

BOSTON LUNATIC HOSPITAL.

*Diet.*—Beef soup, twice a week; baked beef, twice a week; corned beef (cold) once a week; salt fish, once a week; beans and pork, once a week. 250lbs. of beef, at 5½ cents per lb., is the weekly allowance. Average number of inmates, 103.

In the matter of diet for the patients, a very liberal one has hitherto been allowed, upon the ground of its importance as a part of curative treatment. But in view of the fact, that a great proportion of the present inmates are hopelessly insane paupers, the Board of Supervision have concluded that no good reason exists for a distinction in diet from that of the House of Industry. They have accordingly suggested the expediency of equalizing the two, which the Superintendent is about to do.

LUNATIC ASYLUM, MANHATTANVILLE, NEW YORK ISLAND.

| | | |
|---|---|---|
| *Breakfast* | | Meat, hashed with potatoes, or cold, with bread and butter, coffee, milk and sugar. |
| *Dinner* | Monday, Tuesday | Roast meat—beef, mutton or lamb, with vegetables, rice, flour, bread, or fruit puddings. |
| | Wednesday, Saturday | Soup, with rice or Indian mush—pastry on *Wednesday*. |
| | Thursday | Corned beef, with potatoes and other vegetables, pudding, &c. |
| | Friday | Boiled fish (either fresh or salted cod, fresh halibut, shad, mackerel, &c., in their season). |
| | Sunday | Cold meat, with warm vegetables, pastry, cheese. |
| *Supper* | | Bread and butter, tea or milk; molasses gingerbread on *Wednesday*; sugar cakes on *Sunday* evening, cheese do. |

Remarks.—The above articles are of the very best quality, and allowed *ad libitum*. Seven cows are kept on the premises, and the milk, which, with what is bought, amounts to eighty quarts per day, is all used in the establishment. The pastry and puddings are made exactly as in the best private families. There is a great abundance of fruit on the premises, such as cherries, strawberries, currants, blackberries, &c., which are freely allowed to the patients in their season. No difference is made in the diet of males and females. Breakfast, in summer, is at half-past 6 o'clock; dinner at 12; tea at half-past 6. In winter, tea is at 6 and breakfast at 7. The number of patients in the institution is about one hundred. The other inmates, including officers, servants, farmers, and attendants, amount to fifty.

The following abstract of the amount of provisions used in the establishment during the month of June, 1843, is copied from the Steward's Register:

3981 lbs. of Bread, or 833 Loaves.
415 " of Butter.
63 " of Cheese.
72 " of Black Tea.
757 " Brown (Porto Rico) Sugar.
76 " Refined White Sugar.
458 " Flour (for Pastry).
63 " Rice.
150 " Laguira Coffee.
84 Bushels Potatoes.
40 Bunches Salad.
59 Mackerel.
10 Quarts White Beans.
8 Bushels Beets.
18 lbs. Barley.
7 Gallons Molasses.
11 Gallons Vinegar.
41 Bushels Spinage.
3271 lbs. Meat (about 2-3ds beef—1-3d Lamb, Veal, &c.).
100 Dozen Eggs.
For Mustard, Pepper, and Spices, about $56 annually.
Beer and Wine, as prescribed by the Physician.
*Tobacco* (for Smoking, Chewing, and Snuffing), to the amount of $4 50 per month.

From the above it will be seen that the diet does not differ much from that of a well-ordered, respectable private family.

From an examination of the Bloomingdale Asylum Report for the year 1843, I find that the whole quantity of beef, mutton and veal used in the institution for the year, was 41,990 lbs. (cost, $2,099); poultry, 1,420 lbs. ($120); butter, 5,625 lbs. ($762); cheese, 609 lbs. ($37); lard, 538 lbs. ($32); brown sugar, 9,597 lbs. ($696); white do., 656 lbs. ($82); loaf do., 224 lbs. ($26); molasses, 22 galls. ($6.50); coffee, 2,535 lbs. ($186); tea, 878 lbs. ($458); flour, 198 bbls. ($901); Indian and buckwheat meal, 6 bbls. ($30); rice, 497 lbs., pearl barley, 222 lbs., 719 lbs. ($29); fish, $2.41; fruit, $137; *tobacco* and *snuff*,* $53.26; liquors, $19.22.

We have no means of comparing the diet in this Institution with that of the Pennsylvania Hospital for the Insane, except from the items of articles contained under the head of "Household Expenses," in the Annual Report for 1843. From this we gather that there were 241 patients treated during the year; average number in the house, about 109—37,047 lbs. of meat, $1,857; fish, $150; poultry, $89; eggs, $73; butter, 5,121 lbs. ($897); cheese, 877 lbs. ($70); flour, 224 bbls. ($1,098); rice, 8,684 lbs. ($278); meal, $26; fruit, $182; vegetables, $20; tea, 757 lbs. ($465); coffee, 3,202 lbs. ($301); cocoa, 472 lbs. ($98); sugar, 12,821 lbs. ($937); molasses, 345 galls. ($92); malt and hops, $28, &c. &c.

### DIETARY OF THE NEW YORK STATE LUNATIC ASYLUM, UTICA.

The following directions were prepared by the Superintendent, for the guidance of the steward at the opening of the Asylum. We are informed that they have been essentially adhered to, and that the supplies for the household have been abundant and of good quality:

*Breakfast.* Coffee, bread, butter, potatoes, cold or warm meat, hashed meat, mackerel, sausages, dry or buttered toast, and buckwheat cakes in the season. These articles varied according to the season of the year, and to afford a frequent change.

*Tea.* Tea, bread, butter, biscuit, toast, plain cake, gingerbread, crackers, cheese, apple-sauce, and berries in the season. These so varied as to make some change frequently.

* No injury, we suspect, would be sustained, were these articles to be dispensed with entirely.

| | | |
|---|---|---|
| *Dinner.* | Sunday, | Cold meat, potatoes, pudding or rice, molasses, bread, butter, crackers, cheese, pie. |
| | Monday, | Boiled corned beef, vegetables, rice, molasses, bread and butter. |
| | Tuesday, | Roast meat, vegetables, pie or pudding, cheese, bread and butter. |
| | Wednesday, | Soup, boiled fresh meat, stew-pie, beef steak, fresh fish, poultry, or other articles in the market and not used other days, bread and butter. |
| | Thursday, | Same as Monday. |
| | Friday, | Same as Tuesday. |
| | Saturday, | Boiled salt fish, rice, molasses, or pudding, vegetables, bread and butter. |

The sick have a prescribed diet. Milk is abundantly supplied to all the tables, and fruits, especially apples, are often furnished to such of the patients as are not likely to be injured by them.

Ten minutes before each meal, a bell is rung to apprise the attendants in the wings, that it is time to prepare the tables for meals. With the assistance of a few trusty patients they prepare the tables and receive the food from the kitchen.

During meals the attendants wait upon the patients, and take their own meals from the same table afterwards. Sometimes, when all the attendants are not needed to wait upon the table, one or more eat with the patients. This practice, we are informed by the Superintendent, works well, and produces no complaint from any quarter. It is an admirable plan to allay that suspicion and jealousy, so characteristic of the insane, that their attendants fare better than they do. There is but one kitchen, and the food for the whole household is alike, except that the sick have such articles prepared for them as are directed by the physician. "Occasionally," says the Superintendent, from whose first Report we gather the above items, "patients are disposed to eat too much for their own good, and some of full habit and much excited, require an unstimulating diet; but generally, we consider an abundant supply of good, plain, nutritious food the best for our patients."

The following was the daily consumption of the principal articles, in December, 1843, when the number of patients was 203, and the whole number of inmates 260:

| | |
|---|---|
| 3 | bushels of potatoes. |
| 245 | pounds of bread. |
| 37 | " of butter. |
| 2½ | " of coffee. |
| 1¼ | " of tea. |
| 26½ | " of sugar. |
| 127 | " of corned beef, Monday and Thursday. |
| 160 | " of fresh meat, Tuesday and Friday. |
| 48½ | " of codfish, Saturday. |
| 68 | quarts daily. |

The officers of the house and visitors, we are told, occasionally eat with the patients, and that the tables, in the quantity and quality of the food, neat appearance and general arrangement, will favorably compare with those of good boarding houses. No one, we think, will doubt this when he finds that the bill of fare closely resembles that of the Astor House. Of the 196 patients now in the Asylum, all but eleven take their meals with the others, at tables furnished with knives and forks, tumblers

and handsome table crockery. No tin or wooden dishes are used at any of the tables. We agree with the Superintendent that this arrangement in relation to taking their meals, conduces very much to the restoration of the insane, and that those rarely recover who take their food in a rude manner, in solitary cells, swallowing it like ravenous animals.

Dr. Brigham very justly remarks that patients may be supported in a cheaper manner, but not if they are to have allowed them all the chances they ought to have for recovery. The whole establishment is an honor to the State, by whose munificence it was founded and is supported, and the internal domestic, dietetic, hygienic, and medicinal regulations do great credit to the intelligent Superintendent. The only danger is, that so large a number of patients may be accumulated in the Institution, that justice could not be done them, and thus their chances of recovery lessened. In our judgment, 200 patients is the maximum number that ever ought to be placed in one establishment, and under the charge of one Principal. It matters not how many assistants he may have, the Superintendent ought to learn from his own daily personal inspection and observation, the mental and physical condition of every one of his patients. If they exceed 200, he will not be able to do this.

Contrast the above picture with the following, from the pen of Dr. A. B. Whiting, representing the condition of the pauper lunatics supported by the city of New York, on Blackwell's Island, during the past year:

"Let us take the history of one day," says Dr. W., "and imagine ourselves waked by the unnatural sounds of one of these halls; the unmeaning, idiotic laugh, the muttering voice of the melancholy, the cursing of the morose, the yells and ravings of the maniac, mingled in discordant din, while the eye can rest only on those whose features and bearing accord too well with the unearthly music they utter, packed side by side in thick array, aroused from weary beds, to the various unnatural pursuits, that the mind unemployed always suggests; add to this the close atmosphere, loaded with the sickening smells that emanate from those who are ignorant of the rules of decency, and unconscious of any dictates of cleanliness. Follow them, as dressed in an uncomely garb, they crowd into the breakfast hall; here no cheerful repast awaits them, but to coax a sickened appetite, we find *a piece of bread and a tin cup of indifferent tea, flavored with molasses!* Then commence the other labors of the day; the idiot sinks into his corner, the moody measures with a slow pace the extent of his enclosure, the irritable (a large number) begin to quarrel with each other and themselves till night arrives—welcome, did it bring forgetfulness and repose, but it brings only renewed discomforts. Who could wish the experience of such a day! But these poor wretches thus spend weeks and months. Whose mind does not revolt at the description! who does not see, that such a place and such a life, is but poorly adapted to restore the insane, but rather to aggravate and confirm! To the wilfully vicious and criminal, we are far more humane, and have made provisions that, in some respects, would better comport with the character of a lunatic asylum, and contribute more to their benefit than those that our asylum enjoys!"

And this is the provision made by the great city of New York for her unfortunate insane, and in the nineteenth century. We are, however, happy to learn that some reforms as to domestic arrangement and attendance, have recently been introduced, and there is every reason *now* to believe that others will speedily follow. God speed them!

The effects of the generous plan of diet adopted at the State Asylum, at Utica, are seen in the following table of the *weights of patients* on admission, and when discharged:

| | | |
|---|---|---|
| Total weight on admission of 276 patients, | 34,856 | lbs. |
| Total weight of those discharged and remaining, Dec. 1st, | 35,885 | |
| Increase of weights of all received, | 1,029 | |
| Total weight of men on admission, | 20,440 | |
| Total weight of men at the end of the year and when discharged, | 20,981 | |
| Increase, | 541 | |
| Average weight of men on admission, | 138 | 11 oz. |
| Average wt. of men at the end of the year and when discharged, | 141 | 10 |
| Total weight of women on admission, | 14,416 | lbs. |
| Total wt. of women at the end of the year and when discharged, | 14,904 | |
| Increase, | 488 | |
| Average weight of women on admission, | 112 | 10 oz. |
| Average weight of women at the end of year, when discharged, | 116 | 7 |

With the exception of two, all discharged cured had gained flesh, some of them from 10 to 18 pounds, one 37 pounds. Total increase of weight of the 53 discharged cured, 306 pounds.

Dr. Pliny Earle, in commenting on these results in the April Number of the "Am. Jour. Med. Sciences," remarks that, "if Dr. B. has done as well for the mental and moral natures of his patients as he has for their corporeal, he may rest well satisfied. It may be remarked, *en passant*, that an increase of weight in a patient is no positive evidence of a progress towards mental integrity; on the contrary, it is very common, when 'recent cases' are becoming 'chronic,' or mania is becoming converted into dementia, to see the patient increase sometimes very much in weight." All this is very true, but Dr. B. nowhere asserts that increase of bodily weight is *necessarily* attended with restoration to reason; all he would contend for is, that other things being equal, insane patients stand a far better chance for restoration under a nutritious and even generous system of diet, than they do under a scanty or innutritious one; and we concur fully in this opinion. Experience has sufficiently demonstrated its correctness.

DIETARY OF THE CONNECTICUT RETREAT FOR THE INSANE, AT HARTFORD.

The diet of this Institution, is very similar to that at the New York State Asylum, above given; though, if anything, inferior in point of abundance and variety. The frequent changes in the medical superintendency of this institution have operated somewhat against its interests; but, at present, we learn it is very successfully carrying out the wise designs of its founders. Some, perhaps invidious persons, doubt whether the State has any great claims to liberality for erecting an Institution, where patients can be admitted by paying in advance from $3 50 the lowest, to $12 per week; (two dollars per week, extra, for those who come from other States), as they say as good fare and accommodations, with suitable attendance, could be obtained in private families at a less expense. It is true that the Managers are authorized to receive *ten* indigent lunatics, inhabitants of the State, whose disease has not exceeded *six months*, at two dollars per week; but then, no person is allowed to remain in the Institution over six months on these conditions; and, moreover, even this privilege is not granted except a certificate be obtained from a magistrate

of the town in which said lunatic resides, stating, that from the evidence he has in his possession, he is of opinion that said indigent lunatic does not own property to the amount of over $100; and that his disease has not exceeded the period of six months. Now, according to the census of 1840, there were 542 lunatics in the State; but, from a later investigation, it appears that there are at least 1,000, or in the ratio of 1 to 262 of the population,* and these are left to be supported by individuals, often unable to bear so heavy an expense, or to be farmed out by the towns to the lowest bidder—a system most degrading in its character and tendency, and most injurious in its results. We are surprised that a system so reckless of the feelings of friends and relatives, and so contrary to the usages of, in other respects, a civilized people, should still be permitted to be practised. We would carry out this principle so far as to allow no director or manager of a Lunatic Asylum or Hospital, and no "select man," to be interested, directly or indirectly, in furnishing supplies for paupers or lunatics.

The diet at the Connecticut Retreat, I have stated, is not dissimilar to that at Utica: about half the patients take their meals with the Steward, Matron, and Assistant Physician. The breakfast hour varies according to the season of the year, from 6½ to 8 o'clock; dinner at half past twelve o'clock, and tea at six o'clock. During Dr. Brigham's superintendency, I can testify from my own observation, that the table was genteelly arranged, and handsomely furnished; and in these respects, as well as in the abundance and quality of the food, would favorably compare with respectable boarding houses in Connecticut.

### DIETARY OF THE MASSACHUSETTS GENERAL HOSPITAL.

The following directions, with respect to diet, are furnished the patients of this Hospital, on admission, on a printed bill or card; no visitor is allowed to bring any article of food into the Hospital for any patient.

"The diet of the patients will be prescribed by the physicians and surgeons; and their prescriptions must be rigidly adhered to. The particular articles, to be used as food or drink, will be prescribed; or, the diet will be prescribed under the following general terms, viz.: *House Diet, Vegetable Diet, and Liquid Farinaceous Diet.*

"The *House Diet* consists of the following articles, viz.: tea, coffee, shells, cocoa, bread and butter, for breakfast and supper; and each patient may choose among the liquids above mentioned, provided he gives notice of his choice to the nurse in convenient season; and for dinner, fresh meat, fresh and salt fish, broth or soup, potatoes, and occasionally other vegetables, bread, coarse and fine, bread pudding, rice and hasty pudding: water for drink.

"The *Vegetable Diet* consists of bread of various kinds, rice, hasty pudding, potatoes, and other vegetables; milk, cocoa, tea, and coffee.

"*Liquid Farinaceous Diet* consists of gruel made from either Indian or oat meal, sago, tapioca, and rice, with cocoa or milk.

"In regard to *House Diet* it is not meant that every article mentioned for dinner will be on the table every day; nor that patients are to order those articles at their own pleasure; but that they are to partake of such as are prepared for the day and placed on the table.

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* There are now some twenty Hospitals for the Insane, in the United States, accommodating some 2,500 patients, while according to the last census there are 17,181 Idiots and Lunatics in the United States.

"When patients believe that particular articles are necessary for them, they will mention this to the medical officer, under whose care they are placed, and he will order the same, if he thinks it necessary. He will also give specific orders for diet in any case in which he thinks them requisite; and he will likewise limit the quantity in such way as he believes necessary for the welfare of his patient in any case. If the nurses observe that any patient takes food or drink in excess, it shall be the duty to make the same known to the medical gentleman, under whose charge such patient is placed.

"When any particular diet is ordered for more than a day or two, it shall be noted on the card on the patient's bed, so that the medical attendant may be reminded of it; and articles particularly expensive shall not be continued longer than necessary for the patient's welfare."

The following additional particulars are kindly furnished me by the Superintendent, Mr. Goodwin. The Dietary of this establishment does great credit to its Managers, and is well worthy of imitation in other institutions of a similar kind. In fact, we are acquainted with no hospital where the comfort and health of the parties are consulted, with so little regard to expense: and certainly none in which there is more assiduity and skill, and less experimental surgery displayed, than in the Massachusetts General Hospital.

"*Massachusetts General Hospital,*
"*Boston, April 13th,* 1844.

"To Dr. Charles A. Lee—

"Dear Sir:—Yours of the 25th ult. was not received till this week, by which I was sorry to hear of your disappointment in not receiving the paper I sent you. I hope you will be more fortunate this time. In my last I think I stated to you that the House Diet Dinners was on Monday, corned beef and some kind of pudding; in fact, we have a pudding every day with dinner: Tuesday, roast meat (veal, or mutton, as they may be in season): Wednesday, fresh fish (either fried or boiled): Thursday, roast beef of the first quality: Friday, soup: Saturday, salt fish: Sunday, roast meat and baked beans: besides all the foregoing, more or less have custards, broiled chicken, or beef-steak, almost every day; also every variety of bread and biscuit. If there are any other questions you wish answered, I will do it most cheerfully.

"Yours, respectfully,
"John M. Goodwin, Superintendent."

MASSACHUSETTS STATE LUNATIC HOSPITAL, AT WORCESTER.

This we regard as the model Institution of the kind in the United States, and it is so considered throughout the United States. It is unnecessary to give the precise details of the manner of living; suffice it to say that the food furnished the patients is of the best quality, simple and plain, but substantial and good, with few delicacies. Coffee in the morning, and tea in the evening, are furnished to all. Animal food is used once a day, and sometimes twice, and vegetables in perfection and variety, after the custom of the New England families. The articles of food are the best the market affords, and are prepared with skill and care for the table, and the variety is sufficient for health. Water, with coffee, tea and milk, constitutes the drink of the whole family, officers, attendants, and patients. Neither beer, cider, nor any other article that can intoxicate is admitted in the establishment; all are pledged, as they should be, to abstinence principles. Milk is the diet of such persons as prefer it, and is extensively used in the family every day, the quantity used, averaging from 15 to 20 gallons a day. Invalids often use milk, and preparations of milk,

as a large part of their food. Dr. Woodward remarks that "the insane laboring people eat heartily and have no dyspepsia. Most of the insane have good appetites and eat well; some are in feeble health, and have a prescribed diet every day. The native fruits are given freely in the season of them: apples are dealt out plentifully in the winter, and candy-making and corn-parching are among the winter amusements. A few individuals are difficult about their food, and for months together take none without being fed." In these cases Dr. W. has resorted successfully to the practice of introducing fluid aliment into the stomach by means of the stomach pump; from two to three pints of milk daily being found to sustain life very well.

The following items of provisions, with the prices, are copied from the Annual Report of 1841, the number of patients averaging about 230, the whole number treated during the year being 399:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Beef, 24,259 lbs. | cost | $1,482 | 21 | Biscuit, | cost | $109 | 77 |
| Pork, 2,978 " | " | 203 | 07 | Rice, 1,487 lbs, | " | 71 | 00 |
| Veal, 3,944 " | " | 251 | 69 | Butter, 10,201 lbs. | " | 1,751 | 20 |
| Sausages, 489 " | " | 49 | 90 | Milk, 639 quarts, | " | 25 | 91 |
| Salt Beef, 191 " | " | 13 | 38 | Cheese, 6,382 lbs. | " | 484 | 16 |
| Salt Pork, 2 barrels, | " | 32 | 00 | Eggs, 601 dozen, | " | 90 | 81 |
| Tripe, 493 lbs. | " | 40 | 56 | Tea. 476 lbs. | " | 271 | 25 |
| Muttn & lmb, 2,027 lbs. | " | 161 | 93 | Coffee, 1,400 lbs. | " | 167 | 27 |
| Hams smoked, 642 lbs. | " | 67 | 00 | Brown Sugar, 8,975 lbs. | " | 730 | 35 |
| Tongues, sounds, 248 lbs. | " | 26 | 20 | Loaf do. 707 " | " | 84 | 70 |
| Poultry, 1,004 lbs. | " | 95 | 50 | Molasses, 495 gallons, | " | 157 | 87 |
| Fresh Fish, 1,483 lbs. | " | 72 | 36 | Honey, 230 lbs. | " | 19 | 58 |
| Salt Fish, 4,875 " | " | 110 | 86 | Fruits, Apples, Pears, | | | |
| Salmon, 1 barrel, | " | 18 | 00 | Peaches, Lemons, &c. | | 592 | 07 |
| Potatoes, 1,472 bushels, | " | 472 | 39 | Spices, Salt and Small | | | |
| Flour, 231 barrels, | " | 1,432 | 20 | Groceries, | | 160 | 72 |

We must here bring our article, already too protracted, to a close. We might here present a great many more details, in relation to other institutions of a similar kind, but our limits forbid, and it is moreover unnecessary. Our design was merely to call attention to the subject, as one which has not hitherto attracted much attention from the profession in this country; although its importance is not less than that of *medication*, on which, as it seems to us, too much confidence is placed, to the neglect of dietical regimen and domestic management. If this end is attained, our object is accomplished.

*New York, April 16th*, 1844.

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ART. VIII.—*Case of Diabetes Mellitus.* By WILLIAM GRAYSON, M.D., of New York.

IN January, 1843, I was requested to see, professionally, Mrs. H——, a lady sixty years of age, plethoric, of full habit and lymphatic temperament. She had enjoyed good health, with but little interruption, until within a short period of the above date. At this time, there were lassitude and great loss of strength, pallor of countenance, pulse quick and frequent, small and feeble, with dry skin, furfuracious or scaly cuticle, and con-

stant thirst. The papillæ of the tongue covered with a white, thin crust, as if milk had been spilt on it. On inquiry, I was informed that for some weeks there had been a preternatural flow of water from the kidneys, which, at this time, amounted to three quarts in the twenty-four hours, and was evidently increasing. It was found to be extremely limpid, imparting an odor not unlike that of violets. A sense of weight and of great uneasiness was felt about the lumbar region, extending to the pelvis. There was considerable loss of flesh, though the appetite was much less impaired than might have been supposed. With these indications, no doubt could remain as to the nature of the malady; but of its particular character, whether *diabetes mellitus*, or *insipidus* (according to nosology), was to be determined by investigation. One pint of the water was evaporated, giving a residuum of sugar, or saccharine matter, of firmer consistence than honey, which weighed ten drachms.

In a short time, the amount of water discharged attained its maximum extent, which was four quarts in the twenty-four hours. I directed a generous diet, principally of animal food, together with the free use of the aqua calcis, or lime water, and a glass or two of good port wine at dinner. No sensible benefit seemed to arise from this course of treatment; and, after sufficient time had elapsed, the following mixture was directed, a tablespoonful of which was taken morning, noon, and night: Tinct. Cincho. Comp. ʒ iv.; Tinct. Valeriani, ʒ ij, to which was added, night and morning, ten drops of Tinct. Lyttæ, gradually increasing it to fifteen drops each time. The lime-water was given *ad libitum*, and a half pint of strong *serum aluminosum* was directed to be taken also morning and night. The water that passed was saved, and measured at the expiration of twenty-four hours; and every few days a pint was evaporated to see the amount of sugar it then yielded. In a little time, the amount of both water and sugar, under this treatment, was found sensibly diminishing; the former, in the course of eight or ten weeks, dwindled down to nearly two quarts, and the latter, at the end of three months, had come down to ʒij, which, in six or eight weeks more, disappeared entirely. For a long time there was great loss of flesh and muscular strength, yet the functions of the different viscera, except that of the kidneys, seemed to be performed naturally, and the appetite continued particularly good under such circumstances. It was astonishing, as well as gratifying, to observe the marked and decided influence of the Tinct. Lyttæ in arresting this malady. Though it was doing, together with its auxiliary remedies, all, and, indeed, more than we had a right to expect, yet, at one time, through the persuasion of a medical friend, I consented to omit it, and use the Tinct. of Iodine in its place. Only a few days were necessary to show the propriety of reverting to the Tinct. Lyttæ, which was done with the same happy effect as before.

From the date of first seeing the patient to that of withholding the remedies in question, was something like five months, when, from her augmented health and strength, nothing more was deemed necessary than the observance of prophylactic rules, attention to diet, and proper exercise, together with the occasional use of the Tinct. Cinchonæ, which was abandoned in a few weeks. Early in the autumn, the lady made a visit into the country; and, at the end of a month, she returned reinstated and invigorated with her accustomed health.

ART. IX.—*Remarks on Convulsions in Children, resulting from Febrile Excitement.* By N. MORRELL, Assistant Physician, Long Island Farms.*

IN young children, before the fontanelles have closed, if an observer watches the progress of fever verging toward convulsions, he will mark a tolerably uniform succession of phenomena; such as, a state of abdomen, tumid to the eye and spongy to the touch, skin very warm, respiration hurried and ineffectual, face of a slightly venous hue, and an unusual prominence of the fontanelles. This last, by the way, affords the best opportunity of examining the pulse, the force and frequency of which will be evident both to the touch and the eye. Continuing his observation, he will find the abdomen to become more spongy, the face more dingy, the fontanelles more prominent and pulsating more violently, and respiration more ineffectual; and, finally, he will discover the glottis to be closing, and convulsions about to commence. During the convulsion, he will observe the fontanelles alternately rising and receding, in proportion as the contractions and relaxations of the voluntary muscles are more or less frequent, or as they are moderate or violent. At every contraction, the fontanelles project; at every relaxation, they recede. The pulsations of the heart, as seen at the fontanelles, are less frequent, but more violent than before the convulsion. The muscular relaxations are of longer duration; but at each one, the glottis opens when the little patient has one or two deep inspirations. The fontanelles now resume their natural position, the venous color of the face diminishes, the convulsions cease, and the heart, soon after this cessation, pulsates nearly as frequently, but not so violently as while the fit endured. If the disease be advancing toward a fatal termination, he will observe the fontanelles gradually becoming still more prominent and more violently expanded, the glottis nearly permanently closed, respiration quite ineffectual, black blood circulating in the arteries, the lungs engorged with blood and frothy serum, and, finally, one long, violent, and enduring spasm, which relaxes only with the cessation of life.

This alternate contraction and expansion of the fontanelles, during convulsions, have been repeatedly observed by me to be separate from arterial pulsation, and to be consonant with the contractions and relaxations of the voluntary muscles.

Dr. Alexander F. Vaché was the first to remark this phenomenon, in a case of severe fracture of the skull, from which several portions of bone had been extracted. While in this condition, the patient was seized with convulsions; and during their continuance, he observed the brain, at the uncovered part, expanding and contracting in consonance with the motions of the voluntary muscles. It may, therefore, be regarded as an established fact, that, during every kind of convulsion, the brain is also in a state of violent agitation.

Is this convulsion of the brain the result of action in that organ itself, or is it the consequence of contraction in the voluntary muscles?

Although, in the present state of medical science, it is not possible, perhaps, to trace every change in the series which constitutes fever, in many cases, a state finally occurs in which there are violent arterial action

* The average number of children at these Farms is 800, and Dr. Morrell has been connected with the Institution for the last ten years. EDITOR.

on the one side, and sluggish venous circulation on the other, connected with respiration imperfectly performed, and a tendency to congestion of the lungs. In other words, there is a state in which, on the one side, respiration, imperfectly performed, affords no aid to the return of venous blood from the abdomen and head, but causes congestion of the lungs; while, on the other hand, the heart impels arterial blood with violence toward the head, causing the brain to become compressed. If, as in children, the fontanelles are not closed, they become prominent; and if, as in fractures in adults, large portions of skull have been removed, the brain protrudes; but the pressure still accumulating, it finally reaches the medulla oblongata; and thus, by still further impairing the function of respiration by affecting the eighth pair of nerves at their origin, it closes the glottis and produces convulsions; these spasms being an effort in which the voluntary muscles are engaged to maintain respiration. From the moment the convulsion, and the consequent violent muscular action, commence, venous blood is returned rapidly from the extremities toward the chest; and it is prevented from circulating through the lungs by suspended respiration, and from returning upon the extremities by the valves of the veins; and hence it turns in the direction of those veins which have no valves, and regurgitates upon the brain and abdomen. Now this regurgitation causes that expansion and apparent contraction of the brain observed during convulsions, and also that engorgement of the lungs and brain which is found in such cases, after death.

From this view, when the observer comes to a case of convulsions during fever, he marks but one indication to restore and maintain free respiration. He cuts one or both temporal arteries. The blood flows in a large stream, the left side of the heart is emptied, blood not perfectly depurated is poured in, the irritability of the ventricle diminishes, and the lungs are emptied; and all this produces a want in the lungs, or, as Dr. Marshall Hall would say, the lungs acting through the reflex function, open the glottis. Thus does the child take three or four deep inspirations, each inspiration diminishes cerebral pressure by returning the blood from the head, the force of arterial action subsides, and the convulsion ceases.

To prevent the convulsion from returning, other indications are now presented, viz., to maintain the glottis open, to unload the portal system, and to restore the suspended secretions. For the first indication, I give from one to five drops of Cajeput oil;* for the second, a large enema of salt and water; for the third, a dose of calomel. If, notwithstanding, the convulsions return, I repeat the oil of Cajeput, and sometimes the bleeding together with the enema, and give in addition a teaspoonful every four hours of the following mixture: Muriate of ammonia and nitrate of potash, each ℥i, nitric ether, ℥i, and water, ℥iii. Next day, after the calomel has operated, if ague and fever be prevalent, and especially if the fever causing the convulsions, should be of an intermittent or remittent type, the quinine, in combination with muriate of ammonia, without waiting for an intermission, ought to be presented. But if the fever has proceeded from a fall, from whooping-cough, measles, or scarlet fever, the combination of ammonia and nitre with the oil of Cajeput, is indicated. By this mode of treatment, if the patient can be seen as early as the third or fourth convulsion, that is, before the lungs have become engorged, the writer believes that in most instances a cure can be

* For the knowledge of this remedy, the writer is indebted to Dr. Gilbert Smith.

effected; but if much engorgement of the lungs has taken place before the patient is seen, bleeding or any other treatment will be of little avail.

Let us now illustrate these principles by the recital of a few cases.

Case I. June, 1836.—A child, *æt.* six, with large head, lymphatic temperament, and apparently in good health on the tenth of June, had, on the eighteenth, a fit of ague and fever. A little dull on the morning of the nineteenth, about noon she was seized with convulsions, was put in a warm bath and given tartrate of antimony, 1 gr. every fifteen minutes, till she had taken four grs. Vomiting was not produced, and as the convulsions continued at intervals, she was bled from the arm, during which the glottis remained closed; but as the bleeding was finished, the glottis opened, and the convulsion ceased. A discharge was now had per anum, and presently a vomiting of a greenish fluid; the skin became livid, the pupils dilated, and death followed at four o'clock, being four hours after the first convulsion.

On examination, the brain was found at least one eighth larger than the ordinary size, and very soft, though examined sixteen hours after death. Though very vascular, it was not much engorged, a little serum being found in the ventricles; the lungs were so filled with black blood, that on opening the chest, they did not collapse; the mucous membrane of the intestinal canal was healthy.

Case II.—A boy, *æt.* eight, of lymphatic temperament, complained, after several days of indisposition, of being very sick, vomited and went to bed at 9 o'clock, A. M. At 2 P. M., he was found in convulsions, and was put into a warm bath. At 3, I saw him, when he had had four severe fits of long duration; the froth was now issuing from his mouth, lips and skin were livid, extremities rigid, glottis closed, and no respiration. Here was little hope; but the temporal arteries were immediately cut; the blood came of a venous hue; the glottis relaxed, but as the lungs were too much engorged, he could not inspire effectually; and he died at half-past three.

On examination, the brain was found vascular, but not engorged, there being about ℥ii. of serum in the ventricles. On opening the chest, the lungs scarcely collapsed, they being filled with blood and a bloody serum; the mucous membrane of the intestinal canal was healthy.

Case III.—An infant, *æt.* eight days, after having been taken to church for the purpose of being christened, was seized with convulsions, which seemed to be tetanic, or, as Dr. Marshall Hall would say, true spinal. The pupils remained without contraction or dilation, and the eye-lids closed on touching the lashes; no muscle was convulsed which received its motion from the seventh pair, while every other was violently contracted. The mother sat up in bed and held the infant by pressing its shoulders back on a pillow; this position seemed to give it relief—the fits were frequent and of long duration. If, at any time during an interval, while the child respired with some ease, the lips were touched, the convulsion was immediately renewed. The same effect took place on touching the arms, the palms of the hands, or the soles of the feet. Medicine could not, therefore, be given either by the mouth or the rectum. The child died thirty hours from the first convulsion.

Permission could not be obtained to examine the body, but the evidences of pulmonary engorgement were unequivocal; while the brain, though it suffered from regurgitation, certainly did not participate as a cause of the paroxysms, which is a clear inference from the state of the pupil and the muscles supplied from the seventh pair.

The writer could add case upon case with its necrotomy, from his list of unsuccessful attempts at treating convulsions, were those already adduced not sufficient to elucidate the ground-work on which his treatment is founded. He has observed during life, and examined after death, and he believes that, in every kind of convulsion, the respiratory system is the first to suffer; that the lungs become primarily, and the brain secondarily, congested; and that the first object in treatment, is to restore the free action of the respiratory apparatus, inasmuch as a few deep inspirations are sufficient to relieve the brain, which is an effect that cannot occur as long as the lungs are congested. From this will be evident the importance of opening the arteries in preference to the vein, in cases where congestion of the lungs is likely to occur suddenly. The blood abstracted from the arteries, empties the left ventricle, and consequently also the lungs; but blood taken from a vein, diminishes only the quantity returning to the lungs already congested. The effect of phlebotomy, therefore, is not prompt enough to relieve in convulsions; and, indeed, it is scarcely to be relied on in any case where the pulmonary circulation has become suddenly obstructed; nor need the physician fear to cut the temporal artery, for the writer has opened it in many hundred cases without finding more difficulty in arresting hemorrhage from the artery than from a vein.

Case IV.—January, 1836.—A boy, *æt.* four, with large head and well-developed organism, while playing in the room on a little sleigh with his brother, fell from it backward on the floor. Shortly after, he vomited and became better, and attracted no further notice; but on the third day after, he was seized with convulsions. In fifteen minutes, I saw him, still convulsed; and I immediately cut both temporal arteries, and bled the little patient to fainting. When the child fainted, the convulsion ceased; and the cure was completed by a cathartic dose of calomel. The boy, now twelve years of age, is active and intelligent, and he has not since had a convulsion.

Case V.—July, 1836.—Thomas O'Brien, *æt.* nine, was brought to the hospital at 9 o'clock, P. M., complaining of pain in his head; and an hour after, he was seized with convulsions. The arteries were cut immediately and blood taken to ℥viii.; the convulsion ceased, but in an hour after, there was another. Ordered a large enema, to be followed by a camphor poultice to abdomen. There was now an interval of repose, but the paroxysm that followed was long and violent. Another interval; directed ipecacuanha, ℈i., which vomited. Another fit; an interval; another enema, camphor poultice on the bowels continued, and a dose of calomel. The fits did not cease to recur during the night; and next morning, the patient was in the same state. At 3 o'clock, P. M., no improvement. Having learned that Dr. Gilbert Smith had given Cajeput oil with great success in similar cases, I concluded to give it a trial. Ordered Cajeput oil, gtt. viij. In a few minutes he had a bilious stool; and the paroxysm did not again return. Two years afterward, the child

was bound out, he having never had a convulsion subsequently, but was actually one of the most intelligent boys in the Farms' school. What is very remarkable in this case is, that the child, after lying eighteen hours in convulsions, recovered without injury to his intellectual faculties.

Case VI.—February, 1837.—An infant, *æt.* eight months, after a short period of febrile action connected with teething, was seized with convulsions. When I arrived, the child was in a warm bath, with the third fit; I cut both temporal arteries, and took a wine-glass full of blood. The convulsion ceased and returned, and I gave a drop of Cajeput oil, followed by an enema; after the enema operated, the fit ceased for an hour, when it returned. Administered another drop of oil of Cajeput, with a dose of calomel. The convulsions did not recur; and the child recovered on the use of a few drops of muriate of tin, given daily for three weeks.

Case VII.—August, 1840.—A child, *æt.* eight, after two days of intermittent fever, was seized on the third with convulsions; and it was in the fourth fit when I first saw the patient. I cut both temporal arteries, and bled to ℥ viij.; the convulsion continued—administered a large enema of salt and water, with the operation of which, the convulsion ceased. I now gave three drops of oil of Cajeput, with a dose of calomel. The convulsions did not return; and a large dose of sulphate of quinine, combined with muriate of ammonia, given next day, completed the cure.

Case VIII.—August, 1841.—A child, *æt.* ten, after seven days of intermittent fever, was seized with convulsions; and when I came, the mother, who had the child in a warm bath, said that its present fit had continued for fifteen minutes. I cut both temporal arteries; and as they bled very freely, and as the spasms were violent, I concluded that there was no danger in letting the child bleed *ad deliquium animi*, especially as the stream of blood was large from both arteries. In three minutes the child fainted, and the convulsion ceased. Gave now three drops of oil of Cajeput, with a dose of calomel and eight grs. of sulphate of quinine. The next day the patient was free both from convulsions and fever, and in a week he was as well as usual.

Case IX.—This child's brother, not long after, had intermittent fever and likewise convulsions. Cut both temporal arteries—enema, Cajeput, calomel, quinine—cure. Up to this time, 1844, both these children have been doing well.

Case X.—March, 1841. A child, *æt.* four, after eight weeks of whooping-cough, had a sore throat, with fever, and afterward convulsions. When I first saw the patient, the mother had him in a warm bath. I cut the temporal artery immediately, taking ℥ viij of blood. The convulsions ceased. Ordered oil of Cajeput, a dose of calomel, ammonia and nitre: cure. At the present time, 1844, this child is still well, having not had in the interim a convulsion.

Case XI.—August, 1842. A boy, *æt.* ten, thin and scrofulous, after eating some indigestible food, had slight fever followed by convulsions. Before having a fit, he vomited freely. I saw him three hours after the first convulsion, when the boy was in the fifth paroxysm; there was no

sign of much pulmonary engorgement; and the frontal vein was large and greatly distended. I opened the vein, which bled as freely as an artery; and after bleeding to ℥ x, the convulsions became less violent. The flow of blood stopped, and the convulsions ceased wholly. Oil of Cajeput, three drops, and a large enema of warm water with salt, were now administered. The paroxysms returned at intervals for eight hours, during which time, calomel as a purgative, also an enema, and more Cajeput oil, were given. Next day about the same hour, the convulsions returned; again the patient was bled to ℥ vi.; and the Cajeput oil, calomel, and enema, were repeated. The convulsions ceased a second time, without again returning; and after three weeks the child was completely recovered. Up to the present time of writing, he has been wholly free from convulsive or any other disease.

Case XII.—September, 1842. An infant, *æt.* eleven months, in an ague and fever district, was seized, in a paroxysm of fever, with convulsions. Opened the temporal artery, and took ℥ ii. of blood. Ordered oil of Cajeput, half a drop, calomel as a purgative, and afterwards quinine with muriate of ammonia and muriate of iron. The convulsions ceased, but the fever did not yield; three months afterwards, the child died of hydrocephalus. On examination, the ordinary characteristics of this disease were discovered; as also general anemia, and serum in the ventricles.

Case XIII.—July, 1842. A boy, *æt.* two, short necked and well developed, had convulsions during a paroxysm of intermittent fever. Saw him three hours after the first convulsion; he had just passed the fourth fit, two of which had been of long duration; the pupils were contracted; the breathing laborious; senses suspended; the veins of the face turgid, especially the frontal vein, which was opened and allowed to bleed to ℥ ii. The senses still remained suspended; bled again from the artery, to ℥ iii. The breathing was now immediately relieved, and the senses began to return. Ordered oil of Cajeput, three drops, calomel grs. viij. In four hours, another convulsion occurred; a large enema of salt and water was administered, which produced a free operation. The fits no longer recurred. In three days the fever yielded, and the child soon recovered.

Case XIV.—October, 1843. An infant, *æt.* nine months, was seized, after having suffered from the whooping-cough six weeks, with fever. When I first saw the little patient, the fever had endured two days; pulse 140, great determination to the head, respiration short and ineffectual, fontanelles prominent and to be seen pulsating. Fearing a convulsion, I opened the artery and let it bleed to ℥ ii. In ten hours after, the fever not having abated, convulsions re-occurred. When I arrived, the child was in a warm bath recovering from a second fit. Gave oil of Cajeput, one drop, with three grains of calomel. Sensibility now returns; head is very warm; fontanelles still prominent and pulsating. In six hours, another convulsion; repeated oil of Cajeput, gt. j., and also a large enema of salt and water; and applied lotion of sulphuric æther to the head. The convulsions do not return; second day, fontanelles still pulsating; fever not abated; oil of Cajeput gt. j, repeated; calomel grs. iij. Third day, nothing better. Opened the artery again and bled to ℥ ii. and ordered the following:

℞ Ammoniæ muriat.
Potassæ nitrat. āā ʒj.
Æther. nitr. ℥j.
Aquæ, ℥iij.

Give a teaspoonful every three hours.

On fourth day, pulse still 140, without force; gave enema of warm water twice a day, and continued the rest of the treatment, in gradually increased doses. On fifth day, much improved; in the evening, the child perspires freely, the paroxysms of coughing grow more frequent, and the pulse at intervals, between the paroxysms, at 100. Sixth day, still improving; no fever. Seventh day, out of danger. On the 20th of November, the child had perfectly recovered.

Case XV.—September, 1843. A child, *æt.* eighteen months, fell down stairs and struck upon its head. A few minutes after it vomited, and soon became better, when the mother took no further recognizance of the matter. In a few days, fever supervened, and it was treated by another physician with small doses of ipecacuanha for three days; and on the evening of the third, it was seized with convulsions. I now saw the child, which was then in a warm bath; it had recovered from the third convulsion, and it was breathing with difficulty. There were mucous rale in the trachea, and great frequency of the pulse. I immediately bled to ℥iii. from the temporal artery; gave oil of Cajeput gtt. ij., and directed the ipecacuanha to be continued. That day I met the physician at the bedside; the fever was unabated. As the locality was malarial, I recommended muriate of ammonia and quinine to be given immediately. The child recovered; and it has never since had a convulsion.

It were easy to multiply cases, were it deemed necessary; but those already adduced cannot but be regarded as abundantly sufficient to establish the efficacy of the treatment here pursued. As respects the value of Cajeput oil in the treatment of infantile convulsions, I may here add that my confidence in its powers has been daily confirmed by that best of tests—experience.

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Art X.—*Case of Monstrosity, with an Illustration.* By William Darling, M.D., Prosector of Surgery in the University of New York. *Case of Monstrosity.* By P. A. Jewett, M.D. of New Haven, Conn.

*New York, April 10th*, 1844.

Mr. Editor,—Accompanying this, you will receive an accurate and a striking delineation of the case of monstrosity adverted to in your Number for January last. In making the drawing, the leading object has been to preserve the position and relative size of each organ as much as is practicable.

Such a combination of peculiarities as are here exhibited, I presume has rarely been met with. They are: 1. Hydrocephalus to an enormous extent, as the following dimensions of the head prove. A horizontal line, extending around the head just above the superciliary arch and through

the external occipital protuberance, measures seventeen and a half inches; and a perpendicular line passing through the vertex and the meatus auditorius externus, nineteen and a half inches. 2. Complicated hare lip. 3. Club hand of left side. 4. Talipes valgus of left foot. 5. Transposition of all the thoracic and abdominal viscera. 6. Transposition of all the blood-vessels and nerves, so that the aorta descends on the right, and the vena cava superior, on the left side of the mesial plane. The arteria innomanata, which is on the left side, divides into the left carotid and left subclavian, the tracheal portion of the latter being crossed anteriorly by the pneumogastric nerve, and having the inferior laryngeal nerve winding around it; while the carotid and subclavian of the right side come from the arch of the aorta.

The subject of all these anomalies is a female child at full term. It was a first labor, though there had been at least one miscarriage. The presentation was that of the breech, and everything went on favorably until the shoulders were delivered, when no further progress was made for the space of two hours. Dr. V. Mott, who was now called in consultation by the two attending physicians, ascertained, on examination, that the head had not entered the pelvis; but, by persevering and well directed efforts, he succeeded in effecting the delivery without opening the child's head.

The preparation is deposited in the museum of the University, where those curious in such matters can have an opportunity of examining it for themselves.

The following references will explain the engraving:

A, arch of the aorta; B, heart; C, lung of right side, consisting of two lobes; D, lung of left side, consisting of three lobes; E, pleura costalis of left side; F, upper surface of the diaphragm; G, liver; H, anterior extremity of horizontal fissure; I, fundus of gall bladder; J, spleen; K, sigmoid flexure of colon; L, small intestines; *a*, trachea; *b*, œsophagus; *c*, vena cava superior; *d*, trunk of left vena innomanata; *e*, right vena innomanata; *f*, right subclavian artery; *g*, right carotid artery; *h*, arteria innomanata; *i*, left carotid artery; *m*, left subclavian artery; *n*, pulmonary artery; *o*, left pneumogastric nerve.

WILLIAN DARLING, M. D.

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*New Haven, Conn., March 10th*, 1844.

SIR,—In the January Number of the "New York Journal of Medicine," I notice a description of a "subject brought into Dr. Darling's dissecting room, in which there is a complete transposition of the thoracic and abdominal organs."

In 1839 I dissected a subject in the Medical Institution of Yale College, in which not only the whole of the thoracic and abdominal organs were transposed, but also the origin and distribution of the blood-vessels and nerves, throughout the whole body. There was, in fact, a complete transposition of all the organs and vessels of the body. The subject was a male 65 or 70 years of age. He had apparently been a robust and healthy man, and had died of acute pneumonia. The preparation of this subject is in the Anatomical Museum of the Institution at this time.

P. A. JEWETT, M. D.

SAMUEL FORRY, M. D.

ART. XI.—*Death from Compression of the Umbilical Cord prevented by Inflation of the Lungs of the undelivered Infant.* By JAMES COUPER, M. D., New Castle, Delaware.

THE following case is submitted to the readers of the New York Journal of Medicine, for two reasons:

1. The plan of treatment successfully adopted is, so far as I know, new, and is now suggested for the first time to the medical profession.

2. It seems to me to furnish a ready mode of preventing much of that mortality among children at birth, which, without some addition to our usual resources, must necessarily occur in pelvic presentations.

This mortality is usually ascribed, and no doubt justly, to the stoppage of the fetal circulation, by the pressure of the head upon the cord, before respiration has been established, and subsequent delay in the birth of the head. To estimate fairly the benefit of the plan I propose, it should be borne in mind that the deaths are variously stated at one-fourth, or even one-third, of the whole number of such cases; that this heavy loss of life occurs under the use of the best means yet pointed out by writers to prevent it; and that the method pursued in the subjoined instance, is peculiarly adapted to this class of cases.

CASE.—Mrs. F., having over-exerted herself, was delivered of twins at the end of her eighth month. The labor was slow, but not remarkable in any respect. The first child was a breech presentation, the spine being directed to the left acetabulum of the mother. When the head came to pass the superior strait, the cord was compressed by it, while the expulsive pains became less active than they had been. Soon after this, the pulsation of the cord ceased entirely; the usual convulsive struggle of the child followed; and then all was still. What was to be done in such a case? The spine of an eight months' child would not safely bear the force necessary to an immediate extraction. There was not time for the action of ergot. The face was not yet low enough readily to allow the fingers to be placed at the sides of the nose, that air might have access to the mouth. Nor would the *mere presence* of air have availed, for the child had already become still. In this state of things I executed a plan I had before determined on, and for which I had prepared myself, namely, to *inflate the lungs*, without attempting to extract the child by force. For this purpose I introduced my left forefinger, and with the point of it drew down the chin. Then, using the finger as a director, I passed one end of a long elastic tube, one-fourth of an inch in diameter, well into the mouth, and taking the other end into my own mouth, I blew briskly through the tube two or three times, and immediately I had the satisfaction to see respiration established. Muscular efforts followed, and as these stimulated the uterus to stronger contractions, the labor soon came to a happy conclusion. The tube was kept in the mouth of the child until delivery was accomplished.

[That it is possible for two men to make the same discovery in different ages, or in different countries of the same age, without any knowledge of each other, is sufficiently proved by the fact that, among the ruins of Herculaneum, have been discovered surgical instruments, which, thus lost to the world, have been again invented in recent times. The same, it would appear, has happened to our correspondent. In the

American Journal of the Medical Sciences, for 1829, Vol. IV., p. 285, is an article by Jacob Bigelow, M. D., Professor of Materia Medica in Harvard University, entitled, "*On the Means of Affording Respiration to Children in Reversed Presentations.*" Referring to the fact that, in those cases of labor in which the body of the child is delivered before the head, many children, which are alive when the body is expelled, are irrecoverably lost in the hands even of the most skilful practitioners, before the head can be extracted, Dr. B. says that the object of his paper is to show that the life of the child, under these circumstances, may often be saved "by forming a communication between the mouth and the atmosphere, previous to the delivery of the head." Dr. Bigelow proceeds:

"The method to be pursued in conveying air to the mouth, depends upon the situation of the head. If the chin has descended low in the pelvis, so that the mouth rests upon the perinæum or lower part of the sacrum, and can be readily reached by the fingers, the hand of the operator alone is sufficient to give the assistance required. But if the mouth is situated so high in the pelvis as to be reached with difficulty, or if, from the large relative size of the head, there is much compression, the assistance of a tube may be of use. The mode of proceeding which I have found successful in various instances, is as follows: as soon as the body and arms are extracted, supposing the face towards the sacrum, an assistant supports the body, carrying it towards the pubis; or the reverse, should the position of the face be to the pubis. The accoucheur should then introduce the hand to which the face looks, till the middle fingers rest upon the mouth of the child. The hand is then to be raised from the throat of the child, making the ends of the fingers a fulcrum, and pushing the perinæum backwards. The air will then pass upwards as far as the chin of the child. The middle fingers are now to be separated about half an inch from each other, and thus a complete passage will be formed between them, by which the air will reach the mouth of the child. If the child be in a healthy state up to this period, it will immediately breathe and cry, and the delivery of the head may be safely postponed until the natural pains recur. If, from any degree of asphyxia, the child does not immediately breathe, it may be often made to do so by dashing cold water upon the body, or by other stimulating processes. It has even appeared to me practicable *to inflate* the lungs, in some cases, *through an elastic catheter*. When the mouth is so high in the pelvis as to be reached with difficulty, or when the compression is so great as to obliterate the cavity between the fingers, a flat tube will be found useful, made of metal, of spiral wire covered with leather, or of elastic gum, and having its largest diameter about half an inch. If the tube be of metal, or of any incompressible material, it should be withdrawn during a pain, to prevent contusion of the soft parts, and immediately replaced, if the pain subsides without expelling the head. Such a tube may be considered as a prolongation of the trachea, and is fully sufficient to sustain life by respiration for a considerable time. The tube must be guarded and directed by keeping it between the fingers of the inserted hand."

Among the cases given is the following:

"Case V.—After the birth of the body, the face was found so strongly pressed against the sacrum, as to render it difficult to form a passage for the air. By a gentle extractive force, the head was made to descend lower in the pelvis, *and a tube was placed in the mouth.* The child in this situation respired, and, after a few minutes, with the assistance of a pain, the head was easily extracted."

This, it appears, is an old practice, though it seems to have been lost sight of by nearly all our later writers on midwifery. Hence we have deemed the above article worthy of a place on our pages, while its author has all the merit of an original invention.

Dr. Bigelow refers to Pugh's Treatise of Midwifery, published in 1754, which recommends a practice virtually the same.

"'The arms being brought down, the head only remains to be extracted, which must be done with as much expedition as possible, as indeed the arms ought to be; for when the child has passed the navel, the circulation between it and the mother is stopped, from the pressure of the umbilical rope. You must then introduce the fingers of your left hand into the vagina, under the child's breast, and put the first and second fingers into the child's mouth, pretty far, so far, however, that you are able to press down the child's tongue in such a manner that by keeping your hand hollow, and pressing it upon the mother's rectum, the air may have access to the larynx, you will soon perceive the thorax expand, as the air gets into the lungs. Many authors make very little trouble in extracting the head, but without a well formed pelvis, every operator must know there is difficulty and great danger of losing the child by its stay in the passage; but by this method of giving the child air, I have saved great numbers of children's lives, which otherwise must have died.

"'Before I made use of this method, and pressing externally to assist in extracting the head, I found many children were lost in this situation for want of air, which put me upon inventions; as likewise a third, *which was a curved flattish pipe, as likewise a flexible one, that I introduced into the child's mouth as near to the larynx as I could, the other end external,* which I found answer, but now as I find my fingers generally answer, I seldom make use of it.'"—Page 49-50.

As regards the introduction of the fingers into the child's mouth, and thus pressing down the tongue, the direction would seem superfluous; for, unless the child makes a natural effort to inspire, when the air is brought to its lips, the entire operation will necessarily prove futile. Here Dr. Couper's mode of blowing through the tube would act admirably. —Editor.]

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Art. XII.—*Case of Rupture of the Vagina and Uterus.* By Wm. K. Wagstaff, M.D., Resident Physician of the New York Lying-in Asylum.

*Case of Rupture of the Uterus.* By P. Fahnestock, M.D., Pittsburg, Pa.

March 28th, at 8 A. M., I was called to attend C—— L——, a native of Ireland, aged 28, in labor with her third child. I found her suffering most intensely from the vigor of her pains; she said labor had commenced about two hours previous, although the pains, until now, had been but slight. Upon proceeding to make an examination per vaginam, during an intercession of pains, I found the membranes unruptured protruding some distance from the vulva. These I ruptured; and introducing my index finger into the vagina, I found that I could not reach either the os tincæ or presenting part, although I waited the effects of several powerful contractions of the uterus. I then introduced my index and middle fingers together, when I was enabled to feel the os tincæ, which I found fully dilated and flaccid, and a presentation of the vertex, which

was not forced downward in the least by the expulsive efforts of the uterus. This state of things continued until 2 P. M., when I concluded, as there was no advance in the presenting part, that I might possibly be mistaken in my diagnosis of the presentation; and I therefore determined to have counsel. I accordingly sent for Drs. Cheesman and Johnston. Dr. J. arrived at 3 o'clock, about twenty minutes previous to which the contractions had entirely and instantaneously ceased, leaving a constant sense of uneasiness about the abdomen, and a paroxysmal pain resembling, as the patient herself said, that of cholic. Dr. J. was satisfied, upon examination, that the head presented, and that nothing appeared to indicate a present necessity for interference. At 6 P. M., Dr. C. arrived, to whom I suggested the existence of a rupture of the uterus; but as there was nothing to indicate this lesion, except the instantaneous cessation of pains and restlessness of countenance (for the pulse was quite natural), he concluded that these two symptoms alone were not sufficient evidence that such a state of things existed. It was, therefore, determined that an anodyne should be administered, hoping that its effect would be to soothe the system, and thus tend to bring about proper contractions of the uterus. Accordingly I gave her thirty drops of laudanum every half hour, during two hours, which produced a slightly soporific effect, without, however, causing sleep.

29th, at 8 A. M. She still continues to complain of the cholic-like pains, pulse a little accelerated, otherwise natural, vomiting very troublesome, being unable to retain anything on the stomach. 10 A. M., had another consultation, concluded to administer secale cornutum, which was done without producing any effect. 2 P. M., pulse has become small, quick, and frequent; constant copious vomiting of a greenish-black fluid; abdomen tender to the touch; and a discharge of grumous blood from the vagina. It was now determined to turn the child and deliver immediately. After having administered stimulants, I proceeded to turn; and delivery was soon accomplished, although considerable difficulty was experienced in the extrication of the head, there not having been the least expulsory effort made during the delivery. The placenta came away directly after the child, and the hemorrhage did not exceed six ounces. Upon passing my hand up a second time for the purpose of inducing contractions of the uterus, I found on the posterior part of the pelvic cavity a firm hard body, which I had felt during turning, and which I had then supposed to be the head of another child, and upon reaching still further upward, my hand came in contact with what appeared to be tumors. Dr. C. having examined, immediately pronounced them to be intestines, and consequently a rupture of the uterus. A tight bandage was applied, and as she was almost pulseless, stimulants were given freely. She died in three hours after the operation.

*Autopsy.*—Upon opening the cavity of the peritoneum, it was found to contain about a pint of sanguineous fluid, and the uterus was firmly contracted to its normal size. There was a rupture of the anterior wall of the vagina immediately below the os uteri, extending transversely about one half of its whole circumference, together with a longitudinal laceration of the os tincæ at the centre of its anterior lips, half an inch in length. On the peritoneal surface of the pubic arch, were discovered two large pointed protuberances, situated about an inch on either side of the symphasis.

Taking into consideration the several facts, that during the delivery of the child, or afterward, there was no contraction of the uterus, and that upon the post mortem examination it was found firmly contracted to a normal size, and also that the hand when passed up a second time came in contact, on the posterior part, with a firm, hard body, and above, with a large quantity of intestine, the opinion that the child had been expelled from the uterus into the cavity of the peritoneum previous to any artificial assistance, is rendered exceedingly probable. The uterus and vagina are now in the Pathological Museum of the City Hospital. It may be added that this woman's previous labors had been unattended with difficulty, and that she each time bore a large living child.

[The account of the following case is merely an extract from a letter to us by Dr. P. Fahnestock.—EDITOR.]

On the morning of the 27th of February last, at 8 o'clock, I was requested to see Mrs. Basset, in the city of Alleghany, who was in her tenth labor, all the previous ones having been speedy and easy. On my arrival, I ascertained that the waters had escaped about an hour before with scarcely any uterine effort, and that the quantity discharged exceeded two large chamber-pots full. Upon examination per vaginam, no part of the child could be felt with the finger. In this state, she continued for five or six hours, when she began to complain of some slight pains at intervals of about fifteen minutes, accompanied with a constant burning sensation to such a degree that she had not a moment's ease, but there were no labor pains. By this time, however, the head of the child had descended so much as to be within reach of the finger, and it was found to be of an unnatural feel; and as the parietal bone was moveable, I inferred the head to be dropsical; but as there was nothing in the case to warrant interference, she was allowed to change her position at pleasure. At half past three o'clock, as she was being assisted in turning from her side, she suddenly felt a slight, but rather acute, pain, when, placing her hand on the left side of the abdomen, she requested me also to put my hand there, saying "Doctor just feel what a strange lump is in my side." On applying my hand, I immediately suspected what had taken place; and upon introducing my finger into the vagina, I found that the child had already receded. It was now evident that a spontaneous laceration of the womb had occurred; and that the child had escaped into the abdomen. Having acquainted her husband with the situation of his wife, and desired him to bring in some other medical gentleman, Dr. Spear soon appeared, by whom my view of the case was fully corroborated. I now introduced my hand and delivered the child by the feet; and the only resistance offered was by the head, which was so much enlarged by dropsical accumulations that it was necessary to reduce it by means of the perforator. After the evacuation of a large quantity of fluid, the delivery was speedily accomplished. Having again introduced the hand, it was ascertained that the left side of the uterus was lacerated throughout its whole extent, and that it was irregularly contracted. The placenta, which was found detached and lying among the intestines, was removed, when the uterus contracted sufficiently to prevent the escape of the intestines. She was now bandaged and dry clothes were put under her; and at the end of twenty-three hours, she was a corpse.

ART. XIII.—*Discharge of a Lumbricus Teres, eleven inches long, from the Male Urethra.* By PETER F. CLARK, M.D., of New York.

ON Friday morning, March 22d, I was called to visit Mr. Philemon Fowler, residing at 117 Varick street. He stated, that on Wednesday morning, the 20th, feeling an uneasiness in his bowels, he concluded to take some purgative medicine. The cathartic failing to operate, and his distress increasing, aggravated by an excessive itching in the glans penis, he, in the evening, took an infusion of senna and salts, which, aided by an enema, opened his bowels freely, and afforded relief to all the symptoms except the itching. He urinated as freely as usual during the day and evening, and after the action of the purgatives, obtained some rest. At ten o'clock on the following morning, he voided urine again; and at eleven o'clock, in making another attempt, he passed but a trifling quantity, the flow being suddenly stopped from some cause, which he could not comprehend. The itching ceased about the same time. The day was spent in frequent and unsuccessful efforts to urinate. About nine o'clock in the evening, having removed his clothing preparatory to taking a warm hip bath, and while unpinning a flannel bandage, he observed something about half an inch in length, dangling from the urethra, which he at first supposed to be a string. He took hold of it, and as inch after inch of the strange object was drawn forth, curiosity changed to amazement. On its entire removal, it proved to be a *worm*. It was a male Lumbricus Teres, eleven inches long, and in no respect different from the ordinary worm of that description, found in the intestines: and it is the only worm passed by him, now thirty-three years of age, since childhood.

Immediately after its passage, a copious flow of urine followed, affording complete relief. Now the question arises—How came the worm in his bladder? A brief review of a former sickness will throw some light on this interesting point. In the spring of 1842, he placed himself under my care, presenting the following symptoms: great prostration of strength, emaciation, œdematous extremities, hectic fever, tenderness and soreness in the hypogastric region, frequent inclination to urinate, and great difficulty in doing so, the urine sometimes bloody, and at others showing deposits of mucus, of puriform matter, and of a white pulverulent substance.

An examination proved that there was no stone in the bladder, but detected a partial stricture of the urethra.

Inflammation and ulceration of the mucous membrane of the bladder, with stricture, manifested by such symptoms, did not afford much ground for hope as to any favorable result. The attempt was, however, made to afford relief, by a variety of means, and those that ultimately proved most beneficial, were, frictions to the surface, the warm hip bath, the frequent application of blisters to the hypogastric region, dilating the stricture by the use of bougies, and the internal administration of the tinctura ferri muriatis. By the persevering use of these means, he improved; and by the spring of 1843, he had so far recovered his health and strength, that he resumed his occupation (that of a carpenter). From that time to his present illness, he has been able, most of the time, to perform the labor of a moderate day's work, or to walk with comfort and without fatigue, five or six miles in a day.

I had not supposed that the organ, all this time, was restored to a sound and healthy state, nor did I encourage him with the hope that he

would completely regain his health; but I had reason to believe, that the ulcerative process was arrested, and hoped that the disease was so far stayed, that some years of comfort and usefulness would remain to him. It is now, however, evident, since the passage of the worm, that adhesion has taken place between a contiguous surface of intestine and the bladder, and that a communication was formed by ulceration; and that this probably took place eighteen months since, may be inferred from the fact that there has not been, in any subsequent period, a symptom indicating that such a process was going on. It is singular that the first proof of such a state of things, should be the passage of an intestinal worm per urethram; for there never has been, in the alvine evacuations, anything having the appearance or smell of urine, nor has there been anything in the urine having the remotest resemblance to the intestinal contents.

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ART. XIV.—*On the Use of Mustard in the Convulsions of Children.* By CHARLES S. TRIPLER, M.D., Surgeon U. S. Army.

MR. EDITOR:—Let me suggest to the profession, through your Journal, the use of *Mustard* in the convulsions of children. I had an obstinate case last summer, from teething, in which everything was tried, that I, or others, could think of, without success. As neither antimony, sulphate of zinc, sulphate of copper, ipecacuanha, nor any other emetic usually given, seemed to make any impression upon the stomach, I thought I would try mustard, with a view to its emetic effects. In a few minutes it arrested a fearful attack of convulsions, that had lasted five hours; and that too, *without vomiting* the patient, for some time afterward.

A short time since I had three more cases in the course of a fortnight; with the first I tried the usual remedies, and I also made an ineffectual attempt at venesection (leeches could not be procured). The case still resisted, when the use of mustard again occurred to me. I gave it, and the patient was relieved in five minutes. With the other cases I used the mustard *at once*, and successfully. Its efficacy seems to have no relation to its emetic properties; for its sensible effect, in these cases, is as frequently to purge as to vomit. From my experience of the remedy, I do not hesitate to recommend its employment in these troublesome cases, in preference to any other internal remedy with which I am acquainted. Yours, truly,

CHARLES S. TRIPLER, Surg. U. S. Army.

*Detroit, Mich., March* 4, 1844.

PART SECOND.

# Critical Analysis.

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ART. XV.—*Lectures on the more important Diseases of the Thoracic and Abdominal Viscera, delivered in the University of Pennsylvania.* By N. CHAPMAN, M. D., Professor of the Theory and Practice of Medicine, &c. Philadelphia: Lea & Blanchard. 1844. 8vo. pp. 384.

THIS is a work that belongs to the medical classics. Written in a precise, polished, and energetic style, this production, like those of the classic Rush, can be read with the purest pleasure. How different are its pages from the diffuse, involved, obscure, and saturnine language of many medical authors, whose works have even received the approval of the profession! At the same time, it is often amusing to see with what determined pertinacity our distinguished author will invariably invert every sentence and all its subordinate parts.

Although the subjects treated of in this work are not numerous, yet there are none more interesting and important. They embrace *Phthisis Pulmonalis*, *Cynanche Laryngea*, *Asthma*, *Angina Pectoris*, *Some of the Diseases of the Stomach*, *Some of the Diseases of the Intestines*, *Some of the Diseases of the Liver*, *Icterus*, and *Some of the Diseases of the Spleen*. But these diseases are delineated not only with a graphic pen, but with the fidelity of the hand of a master, whose practical experience has extended over many years of well-employed observation. "*Essentially* does this work consist of lectures, which have been publicly delivered," is a remark that constitutes the first line of the author's preface, and he adds, further on, that some of the articles "have previously appeared in one or more of our medical journals;" but notwithstanding the consequent familiarity of his views, we venture to predict, in view of his reputation and his connection with the oldest school of medicine in the Western hemisphere, that the work will command a very general perusal.

The subject of Phthisis Pulmonalis comprises just one-fourth of the volume, and it is to this topic that we shall confine our present remarks.

It is said that when Harvey discovered the circulation of the blood, there was not a single physician, who had reached the age of forty-five, who did not descend to his mother earth an unbeliever in this great announcement. Aware of this fact, and also of the additional one, that Dr. Chapman had arrived at this epoch in life when the application of hearing to the diagnosis of diseases (percussion), first attracted the attention of the present age (for we are told by our author that it was practised even by the Father of Medicine, "who soon put it into abeyance, probably, from its alleged pretensions not having been realized"), we were not taken unawares by his disparaging language. It did not, therefore, surprise us to meet with the following words: "Both it [percussion] and auscultation seem of late to be gradually losing much of their former

cordiality of support, and by many are treated contemptuously. Details I cannot give."—P. 40.

Now, we would not be dogmatic, but our impression is, that the physical means of diagnosticating diseases, more especially of the thorax, are, in proportion as these methods of exploration become better understood, increasing in favor with the profession.

Dr. Chapman, it would appear, has likewise some opinions upon the subject of Phthisis Pulmonalis, which are certainly by no means general. He says:

"Not prepared at present to deny positively the strumous origin of tubercles, I am, however, very strongly inclined, in opposition to general authority, to maintain their independence of such condition, and at all events, if it be so, the identity of the two productions."—P. 24.

"As prone to consumption as probably most parts of the world, scrofula is seldom or never generated among us; the disease which we occasionally see being chiefly in foreigners or their immediate descendants."—P. 25.

"The native population of this city is nearly exempt from the disease [Phthisis Pulmonalis], and the fact is important, as showing the influence of locality."—P. 28.

Leaving the distinguished Professor to enjoy his peculiar opinion as to the nature of the tubercular deposit, we would ask attention to the manifest contradiction of the two other extracts. In the former, the idea is held out, without qualification, that consumption is not less prevalent in Philadelphia than in "*most parts of the world;*" while in the latter, "*the native population,*" we are gravely told, "*is nearly exempt from the disease.*" Now, did not the statistical reports on the health of the British army, serving in the four quarters of the globe, and also in what has been quaintly styled the *fifth quarter*, teach us, on the one hand, that there is no immunity from phthisis pulmonalis in any climate of the world, and were we not, on the other hand, guided by the axiom, that it is a good rule in philosophy to ascertain the truth of a fact before attempting its explanation, we might at once set about inquiring into the peculiar nature of that "*influence of locality,*" which nearly exempts the native population of Philadelphia from this terrible scourge!

"Certain climates and locations," says Dr. C., "have great influence on the production of phthisis. It is undeniable, that while the hyperborean and torrid regions comparatively escape this severe scourge, it is the medium latitudes, when moist and chilly, and especially a residence in overgrown cities, or along the sea-coast, that generates the consumptive diathesis. The British Isles, which answer to this description, are singularly exposed to the disease; and London more than the smaller towns, the country being much less so, except on the margin of the sea.

"The United States afford similar illustrations. It is on the littoral boundaries of our north-eastern territories that it extensively prevails, and greatly in New York, Newport, and Boston. As we advance southerly, and particularly, receding from the ocean, it sensibly diminishes. *The native population of this city is nearly exempt from the disease, and the fact is important, as showing the influence of locality.* [This wonderful fact has been already quoted!] Equally remote from the sea and mountains, it comparatively escapes from the austere winds of the one, and the cold blasts of the other, maintaining a more regular and moderate temperature, than the latitude of its position would seem to warrant."—P. 28.

"That the sea-board everywhere is more liable to consumption than the interior, seems sufficiently demonstrated, and is conspicuously illustrated in relation to our own country."—P. 86.

Now, as these several assertions have an oracular air about them, and as the evil influence of false doctrines bears a direct ratio to the character of the authority whence they emanate, it behoves us, however unpleasant the task may be, to inquire upon what kind of data they rest. Dr. C. has given us no intimation by what process of reasoning he arrived at the above results, and we are forced to believe that the conclusions are nothing more than the vague inferences drawn by particular practitioners from the few cases of disease which fall under their observation; and this too, doubtless in almost every instance, by physicians whose practice has been limited to one, or perhaps two, localities.

The first opinion advanced in the above extract, that hyperborean and torrid regions are comparatively exempt from phthisis, is true only in part. As it is proved statistically that this disease prevails but too severely in all climates, the exemption of the extreme latitudes has been expressed by Dr. C. in too strong language. In the middle regions of Europe, for example, as is shown in Laennec's work, edited by M. Andral, phthisis is more frequent than in latitudes further to the north or the south; and this law also obtains in the middle parts of the United States, as is shown by the Medical Statistics of the United States Army. Hence, a cold temperature is not essentially, *per se*, favorable to the development of phthisis pulmonalis; and this law holds also, in our country, as regards pleuritis and pneumonia.

The remainder of the extract comprises four other assertions, viz., that phthisis is particularly rife on the littoral boundaries of our north-eastern States; that it diminishes sensibly as we advance southerly, and especially as we recede from the ocean; that the sea-board is everywhere more liable to consumption than the interior; and that the native population of Philadelphia "is nearly exempt from the disease." There is still another, a fifth, which, involving the error of a climatic law, will be considered in the first place.

We cannot here enter into an explanation of the general laws of climate, which, however, ought to be familiar to all our readers. In the United States, we find the laws of climate much modified on the same parallels, from the influence of local causes. Hence we find, in tracing the same parallel of latitude in our northern States, that on the sea-coast of New England, the influence of the ocean renders the climate milder, by modifying the range of the thermometer, and thus equalizing the seasons. Advancing into the interior, the climate becomes more austere, for the extreme range of the thermometer increases, and the seasons are more violently contrasted. Proceeding still further, until we come within the influence of the great lakes, a climate like that of the sea-board is again found; and as the region on the same latitude beyond the modifying agency of these inland seas, is reached, an austere climate is again presented. We thus see, in these laws, determined by the Army Meteorological Register, the difference of temperature, on the same parallel, produced by diversity in physical geography,—affording, indeed, a happy illustration of the equalizing tendency of large bodies of water.

Now, how does this quadrate with the philosophy of Dr. Chapman, who, speaking of a locality equally remote from the sea and the mountains, represents it, as seen above, as "*maintaining a more regular and moderate temperature than the latitude of its position would seem to warrant?*" Strange, that he should not be aware of the climatic law, that in proportion as we recede from the ocean, on the same parallel and on the

same level, does the climate become more austere, the summers hotter and the winters colder! He thus assigns, by way of explanation, what is not a fact in nature; and we shall now proceed still further, in order to show that the law of phthisis which he thus attempts to explain, viz., *that it diminishes sensibly as we recede from the ocean*, is in reality no law at all.

Let us now see what is the result warranted by statistical investigations relative to the influence of the ocean or any other large body of water upon the different forms of pulmonary disease, more especially as our author says "*that the sea-board everywhere is more liable to consumption than the interior.*" As catarrhal affections might reasonably be supposed to express the general influence of atmospheric agents in the most decided degree, the following table will enable the reader to judge for himself:

RATIO OF CATARRHAL DISEASES.*

| Divisions. | Systems of Climate. | Latitude. | | Difference between the mean temperature of winter and summer. | Ratio treated per 1000 strength. | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1st Quarter. | 2d Quarter. | 3d Quarter. | 4th Quarter. | Ann'l result. |
| Northern | Class 1—Posts on coast of New England, | 43° | 18′ | 38° 61 | 63 | 49 | 36 | 85 | 233 |
| | Class 2—Posts on North chain of Lakes, | 46 | 27 | 43 · 00 | 90 | 62 | 50 | 96 | 300 |
| | Class 3—Posts remote from the ocean and inland seas, | 44 | 53 | 55 · 84 | 175 | 120 | 88 | 169 | 552 |
| Middle | Class 1—From Dela. Bay to Savannah, | 37 | 2 | 32 · 99 | 102 | 45 | 23 | 97 | 271 |
| | Class 2—South-western stations, | 35 | 47 | 36 · 83 | 122 | 61 | 33 | 78 | 290 |
| Southern | Class 1—Posts on the Lower Mississippi, | 30 | 10 | 24 · 39 | 82 | 34 | 26 | 60 | 218 |
| | Class 2—Posts in Peninsula of Florida, | 24 | 33 | 11 · 34 | 45 | 24 | 40 | 33 | 143 |
| Average . . . . . | | | | | 98 | 56 | 42 | 88 | 287 |

We thus discover that there is an intimate relation between the laws of climate and the etiology of catarrhal diseases; but this law, so far as we may judge from analogy, is directly opposed to the one laid down by our author. The posts along the coast of New England and those on the northern chain of lakes, with a climate characterized by sudden atmospheric vicissitudes combined with moisture, give a ratio of catarrhal diseases not half as high as do the posts in the intervening region, with a more dry and cold atmosphere. This result is certainly unexpected, being contrary to all our *à priori* reasoning; and were it not that it holds, as is seen in the above table, throughout the United States, the correctness of the data might be fairly doubted. It is a law, warranted by this table, that the prevalence of catarrhal affections increases and decreases, in each of the seven regions of the table, in proportion as the seasons are contrasted, thus maintaining an unvarying relation with the extreme range of the thermometer as connected with the seasons. And this table, when it is considered that it embraces an aggregate mean strength of 47,220 men, and extends over a period of ten years, is surely deserving of respect; and this is more particularly the case, when the result is

* Vide "Climate of the United States and its Endemic Influences." By Samuel Forry, M. D.

contrasted with the opposite opinion, which rests merely upon the unaided observation of certain practitioners of medicine.

The same law as pertaining to catarrhal diseases, is likewise found to hold good, to a great extent, relative to pleuritis and pneumonia. But our space will not allow us at present to go into detail; notwithstanding, it is to be feared, that the explanations already given, in our desire to be brief, may not prove very intelligible.

Judging from the analogy of catarrh, pneumonia, and pleuritis, all evidence would seem to be opposed to the views of our author, viz., that phthisis is particularly rife on the coast of New England, compared with the rest of the United States, and that the sea-board is everywhere more liable to it than the interior, *the city of brotherly love of course excepted!*

But the statistics of the United States Army also afford data upon Phthisis Pulmonalis; and these show that this disease is under the influences of causes to which those of climate are subordinate. Indeed, we are too apt, perhaps from the influence of early opinion, to associate almost inseparably the ideas of phthisis and a changeable climate. A changeable climate, it is true, exercises, on constitutions laboring under, or predisposed to, phthisis, an evil influence; but it is well known that the climates best adapted for the development of the various mental and bodily powers, are those which are the most variable. In countries, too, in which phthisis occurs most frequently, "*those who are least exposed to its influence are precisely those most exposed to the vicissitudes of the climate;*"* and as it has been thus satisfactorily ascertained that the maximum of liability to phthisis in England is found among those who suffer the least exposure to climatic variations, it follows that the influence of these meteorological causes, doubtless in all countries, must be regarded as secondary to the agency of other causes, as, for example, occupation, food, and habits. In the United States, for instance, the medical statistics of the army show that the south-western stations have a higher ratio of phthisis pulmonalis than the posts along the coast of New England. In systems broken down by habits of intemperance, as is too often seen among our soldiers, phthisis is very apt to supervene upon certain chronic affections, as the sequelæ of remitting and intermitting fever, diarrhœa, etc.; and yet *malaria*, it is alleged, is almost a *specific* for the early stage of consumption.

With these remarks we will close our notice of this interesting volume. We confidently bespeak for it a wide circulation.

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ART. XVI.—*Annual Report of the Managers of the State Lunatic Asylum Made to the Legislature of New York, January 18th*, 1844. pp. 66.

*Report of the Pennsylvania Hospital for the Insane, for the year* 1843. By THOMAS S. KIRKBRIDE, M.D., Physician to the Institution. pp. 35.

*State of the New York Hospital and Bloomingdale Asylum, for the year* 1843. pp. 28.

THE New York State Lunatic Asylum is situated about one mile and a half west of the city of Utica, on an elevated and commanding site. The building, which was commenced in 1838, and mainly completed in

* Cowan's Additions to Louis on Phthisis.

the winter of 1841–2, is built of hammered stone, and is 550 feet in length. The superintendent and physician is A. Brigham, M.D., who is distinguished for his knowledge upon the subject of insanity, and for his skill in the management of such patients.

The Report commences thus:

"The Asylum has been in operation since the 16th of January, 1843, when it was opened under some disadvantage of a temporary character, for the admission of patients. Many of the necessary arrangements had not then been completed; only a small part of the furniture had then been procured; the furnaces intended for warming the apartments to be occupied by the patients were unfinished, the verandas uninclosed, and no means then in readiness for furnishing an adequate supply of water. But so strong was the desire expressed in applications from different parts of the State, to have the institution opened at the earliest day practicable, that we fixed on the 16th of January, believing that the small number of patients that would be admitted during the first two or three months, could be made comfortable; and that, in the meantime, the necessary arrangements then in progress could be completed.

"We refer to the first annual report made to us by the superintendent, and herewith submitted to the Legislature, for a full and detailed account of the operations of the Institution, from the time it was opened for the admission of patients, to the 30th of November last. From this it will be seen that during a period of ten and one-half months, *two hundred and seventy-six* patients in all, have been received into the Asylum; that *fifty-three*, during the same period, have been discharged, recovered; fourteen improved; six unimproved; seven have died; and that one hundred and ninety-six were remaining on the 30th of November.

"The Asylum has filled up more rapidly than was anticipated by us at the commencement; and we believe there is no record of so great a number of admissions, during the same period of time, in any similar institution. In thus rapidly assembling so large a number of insane persons together in an Asylum, in many respects unprepared for their admission, and many of them when admitted of the most violent class, accidents of a serious character were reasonably to have been anticipated, besides being adverse in many respects to the success of the Institution.

"Under these circumstances, also, the duties of the superintendent and other officers have been rendered peculiarly arduous and responsible. It is, however, with unfeigned gratification, that we are enabled to state, that no case of suicide or other accident of a serious nature has occurred; that fifty-three of our fellow beings, under the auspicious influences of this Institution, have been restored to reason, to their families, and to society; and that those who still remain, have been rendered comparatively comfortable under the severest of human afflictions.

"It is not easy for any person who has not actually seen the inmates of the Asylum, and remarked their condition on admission, fully to comprehend the extent of the change which is wrought upon them in everything that marks the physical and moral condition of a human being, by being placed under the control and influence of such an institution.

"The success which has thus far attended this noblest of public charities, and the remarkable exemption from any serious accident in thus rapidly assembling so large a number of insane persons with attendants, who, when they commenced, were inexperienced in the performance of their duties, we cannot but attribute in a great degree, to the ability, skilfulness, experience, and entire devotedness to his duties of the superintendent who is placed at the head of the Institution, and who, under the general supervision of the managers, presides over and directs all its operations."

At the date of this report there were 210 patients in the Asylum; and the means of accommodation would not allow them to take more than fifteen more. As the census of 1840 gives 2340 lunatics and idiots for

the State, it is seen that but a small proportion can at present receive the benefits of the Institution. The managers consequently recommend to the Legislature the enlargement of the building as speedily as the necessary means can properly be devoted to this object.

We have here the first annual report of the superintendent, Dr. Brigham, from the opening of the Institution, January 16th, 1843, to November 30th. During this period there have been admitted as patients:

| | Men. | Women. | Total. |
|---|---|---|---|
| | 148 | 128 | 276 |
| Discharged, recovered, . . . . . | 30 | 23 | 53 |
| do improved, . . . . . | 10 | 4 | 14 |
| do unimproved, . . . . . | 1 | 5 | 6 |
| do dead, . . . . . | 6 | 1 | 7 |
| Remaining, November 30th, . . . | 101 | 95 | 196 |

The monthly admissions, the number from each county, and other appropriate data, are here also presented. Seven died, which is a low ratio of deaths; viz., one soon after admission, from exhaustion consequent to abstinence from food and exposure to cold, prior to coming to the Asylum; one from erysipelas caused by a wound before admission; one from paralysis; one from scirrhous stomach; two of consumption; and one from sudden effusion of the brain, the third day after arrival. Further evidence of general good health is afforded by the practice of weighing each patient soon after admission and when discharged, and also on the first of each month of the intervening period. Of the 53 discharged cured, the total increase in weight was 306 pounds, all having gained in flesh, with the exception of two. Some gained from 10 to 18 pounds, and one even 37 pounds. The ages of the patients when admitted, and their ages when insanity commenced, their civil condition, occupations, places of nativity, and supposed causes, are next presented in detail. Among the causes, seven cases, five males and two females, are ascribed to "Millerism." Dr. Brigham thinks that "the most frequent and immediate cause of insanity, and one the most important to guard against, is the *want of sleep;* and he gives cases attributed to different causes, in which, had not loss of sleep preceded the attack, insanity, he thinks, would not have occurred.

Dr. Brigham's views upon the general subject of insanity are very judicious. As regards, for example, classification, he prefers, though no one is unobjectional, a system founded upon the faculties of the mind, which seem to be disordered. He thinks that he could arrange all his patients in the three following classes:

"1st. *Intellectual Insanity*, or disorder of the intellect without noticeable disturbance of the feelings and propensities.

"2d. *Moral Insanity*, or derangement of the feelings, affections, and passions, without any remarkable disorder of the intellect.

"3d. *General Insanity*, in which both the intellectual faculties and the feelings and affections are disordered.

"In each of these classes may be found those who are constantly excited or depressed; but as these different states of feeling are frequently witnessed in the same patients, and often in the same hour, we cannot arrange them in distinct classes.

"According to this arrangement we have of

| | |
|---|---|
| Intellectual insanity, | 15 |
| Moral insanity, | 38 |
| General insanity, | 223 |

"Some of the cases thus arranged are more marked than others. Some of intellectual insanity manifest no disorder of the feelings, while others at times do, though not to any marked extent. So of those morally insane, while in a few we discover no intellectual derangement, in others some is at times exhibited.

"We have no idiots. They should not be classed with the insane, as idiocy is not disease or the result of disease, but the consequence of malformation of the brain."

Soon after admission, the patient's head is measured in various directions, and a record is also made of the number of his pulsations in a minute. These are data that must in the end lead to some important conclusions, whether positive or negative.

We are next presented with the daily routine of business, the diet, the labor, the amusements, the school, the religious worship, and the restraints of the patients; all of which are interesting subjects. That of diet has been fully noticed in a preceding article on Dietaries, by Dr. Lee.

Appropriate suggestions are also offered by Dr. Brigham to those who have friends they expect to commit to the care of the Asylum. Upon this point, a single quotation must suffice:

"Few things relating to the management and treatment of the insane are so well established as the necessity of their early treatment and of their removal from home in order to effect recovery. There are exceptions, no doubt. Some who have been neglected several years and received no medical treatment are sometimes cured, and some also recover at home. But these are rare instances. By examining the records of well conducted lunatic asylums, it appears that more than eight out of ten of the recent cases recover, while not more than one in six of the old cases are cured."

Dr. Brigham also keeps a case book, in which is recorded the history of each patient prior to admission, as far as practicable, and also the subsequent treatment and its results; and as a vast collection of facts relative to insanity must thus ultimately be accumulated, valuable deductions may follow. It is also richly deserving of mention, that he keeps a meteorological observatory, consisting of observations upon the thermometer, barometer, the rain-gauge, and upon the winds and clouds.

Dr. B., without proposing to dwell upon the nature and treatment of insanity, gives the following excellent general views:

"We consider it a disease of the body—a disease of the brain, the material organ of the mind. In the early stage of the disease, there is usually only disordered *action* of the brain, and this can generally be cured, and the organ suffer no injury; but if this disordered action is long continued, it usually causes *disorganization* of the brain, and renders it for ever incapable of properly manifesting its functions; just as a disease of the eye, that might have been easily cured, if judiciously treated at the commencement, terminates in permanent blindness when neglected, though without impairing the health in other respects.

"We see nothing to change in the following views heretofore advanced by us respecting the pathology of insanity.

"1st. In mental alienation the brain invariably presents appearances of disease, which can be distinctly recognized. Exceptions to this, if ever observed, are extremely rare.

"2d. These appearances vary according to the acute or chronic form of the

malady, and according to the character of the affection, whether simple, confined to intellectual disorder merely, or complicated with disorder of sensation and motion.

"3d. In simple intellectual derangement of an acute or recent character, the grey outer substance of the convolutions of the brain is altered in color and consistence; it is red, marbled, and indurated. Sometimes these appearances are confined to the anterior and superior portions of the brain. In chronic cases, all these are more marked. The external layer in such may be separated like a membrane from the lower stratum. In the very chronic cases, especially in dementia, there is often wasting or diminution of the grey substance of the convolutions of the brain.

"4th. In intellectual derangement, complicated with derangement of motion, with paralysis more or less general, in addition to the alterations of the grey substance already noticed, there are marks of disease in the medullary portion of the brain. These are, either hardening, serous infiltration or softening, and generally morbid adhesions of the fibres of the medullary portion of the brain.

"The treatment of insanity is properly divided into *moral* and *medical*. Many cases recover without any medical treatment, by seclusion and quiet—by removal from home and from the exciting causes of the disease, by regulated diet and kind usage.

"Other cases are complicated with disease of other organs than the brain, and require medical treatment, which should however be varied according to the organ affected and the nature of the disease.

"Some cases may perhaps require bleeding in the earliest stage of the disease, but we apprehend such instances are rather rare. Many of our patients appear to have been injured by too much bleeding and depletion before their admission to the Asylum. We use but few medicines for insanity, uncomplicated with other diseases. Common laxatives, with a few tonics and narcotics, constitute the principal. We now rarely bleed or blister, and not unfrequently administer emetics or powerful cathartics.

"We are not, however, neglectful of any new remedy proposed for the cure of the insane. Of late no new method of treatment has been advanced, of which we have heard, unless some of the propositions of M. Leuret, in his valuable work on the *Moral Treatment of Insanity*, may be so considered. He proposes to cure all cases of uncomplicated insanity solely by moral means. He makes great use of the douche and cold effusions. He excites pain and produces unpleasant ideas in order to prevent those still more unpleasant, and thus endeavors to lead patients to seek for pleasure.

"We acknowledge ourselves under obligation to the distinguished physician of the Bicêtre Hospital, for many valuable suggestions, though we think some of his propositions very questionable, and liable to the same objections as punishment and undue coercion.

"Dr. Moreau of Tours, in a recent work on the *Treatment of Hallucinations by Datura Stramonium*, gave us much encouragement of benefiting those of the insane affected by hallucinations of sight and hearing. But we regret to say that after a thorough trial of this remedy in several cases, we have observed no permanent or material benefit from the use of it.

"*Prognosis.*—The longer insanity has existed, the less chance is there for recovery. It is rarely cured after it has uninterruptedly continued for two years, though there is always hope if the patient is vigorous and the form of insanity varies. General excitement of the mind and feelings is more readily cured than monomania or derangement on only one or two subjects; and the more acute the disease, the more rapid usually is the recovery.

"Hereditary insanity, and that produced by injury of the head or arising from peculiar structure of the brain, is curable, but in such cases, relapse is the more to be expected. This is true of those who have suffered from a previous attack. Insanity arising from a violent exciting cause, is more likely to recover than when it is produced by a trivial cause. The middle aged, it is thought, more frequently recover than the very young or the aged. The speedy action of moral causes in producing derangement, is a favorable circumstance; if it has

been slow, recovery is difficult. If insanity is connected with pregnancy, or with uterine difficulty, the prognosis is favorable. If the appetite remains good, and emaciation increases, there is reason to fear the case is hopeless.

"Remissions are favorable, especially if the attacks lessen in violence and duration. No alteration of pulse is an unfavorable indication.

"Insanity arising from excessive study, Esquirol thinks, is rarely curable, especially if there have been deviations from a proper regimen, and when it originates in, or is fostered by, religious notions or pride. It is also very difficult to cure when aggravated by hallucinations. Those forms of insanity in which the patient has a proper notion of his state, present many difficulties if a recovery does not speedily take place. When digestion, sleep and appetite are natural, and the patient increases in flesh without any diminution of the insanity, there is little hope. When the sensibility of the patient is so far weakened that he can gaze on the sun, has lost the sense of smell and taste, and is insensible to the inclemency of the weather, he is incurable. Insanity is incurable when it is the result of epilepsy, and when complicated with this disease or with paralysis, leads inevitably to death."

As the reward of merit, the following paragraph also deserves to be extracted:

"Dr. Buttolph has performed the duties of assistant physician with ability and entire devotedness to the interests of the institution, sharing with me the hardships and anxieties attendant upon its organization."

The following is added as a postscript:

"Since the foregoing report was written we have received *fifty-four* patients, and discharged *twenty-nine*. Our present number is *two hundred and twenty-one*. Applications for admission have been more numerous of late than at any previous time. We now have all our rooms engaged, and are reluctantly compelled to refuse admission to many, and to discharge others, in order to receive the most urgent cases."

The Pennsylvania Hospital, which is a private charitable institution, receiving no aid from the city or State, was founded in 1753; and up to 1841, the insane as well as other patients were received in the buildings in the city of Philadelphia. But in 1841, the insane were removed to a new establishment, about two miles west of the city, styled the "Pennsylvania Hospital for the Insane." Up to 1841, the number of patients admitted into the hospital in the city, was nearly forty thousand, and of these, 4,336 were insane.

The same variety of data is afforded pretty much by this Report, as we find in the one just noticed. At the date of the report of the preceding year, the number of the patients in the Hospital was 118; and since that period 140 were admitted, and 126 discharged or died. Thus the number under care at the close of the last year was 132. Of those discharged during the year 1843, there were cured 68, much improved 7, improved 14, stationary 20, and died 17, making a total of 126.

Dr. Kirkbride, who is peculiarly qualified for the charge of an Insane Institution, speaks strongly in favor of the value of mechanical as well as other kinds of employment in the treatment of insanity; and in illustration, he adduces two very remarkable instances, which, after a failure of all the ordinary means, were thus perfectly restored. D. K. makes very little use of any restraining apparatus; and, indeed, he thinks it quite possible to dispense entirely with it in a well-constructed hospital, properly supplied with an efficient corps of attendants.

In the third place, we will review the "State of the New York Hospital and Bloomingdale Asylum, for the year 1843." The Governors of the New York Hospital report—

"That the important Institutions confided to their management continue to furnish that relief to the afflicted, and those aids to scientific inquiry which led to their establishment, and induced the liberal bounty of the State.

"The Library, which is annually increased by the application of the moneys received for students' tickets, now contains nearly five thousand volumes, of the most valuable works on medicine and its collateral sciences.

The Governors are gratified in being able to add, that the advantages to be derived from the practice of the Hospital, and attendance upon the clinical lectures delivered by the eminent professional gentlemen connected with it, together with the use of the Library, have attracted a greatly increased number of students from different parts of the State.

"THE NEW YORK HOSPITAL.

"The number of patients in this Institution on the 31st December, 1842, was one hundred and ninety-eight, and there were admitted during the year 1843, one thousand nine hundred and two, making a total of two thousand one hundred persons who have received the benefits of the Hospital during the year.

| | |
|---|---|
| "Of this number there have been cured, | 1,239 |
| Relieved, | 133 |
| Discharged at their own request, | 215 |
| Discharged as improper objects, | 44 |
| Eloped or discharged as disorderly, | 71 |
| Died, | 170 |
| | 1,872 |
| Remaining in the Hospital on the 31st Dec., 1843, | 228 |
| Total, | 2,100" |

As respects the Bloomingdale Lunatic Asylum, it is further reported that the number of patients on the 31st of December, 1842, was 110, and that 85 were admitted during 1843. Thus there was a total of 195 under treatment in the Asylum during the last year. Of this number there have been cured, 49; discharged, much improved, 23; discharged at the request of friends, 7; eloped, 2; died, 14; remaining on December 31, 1843, 100; making the above total of 195.

Accompanying this is the report of the Resident Physician, Dr. Wm. Wilson, to the Bloomingdale Asylum Committee. The number of patients corresponds of course with the statement already made; and appended to this report are the usual tables on the several subjects adverted to in the notice of the New York State Lunatic Asylum.

"The proportion of recoveries to admissions," says Dr. Wilson, "has been, of recent cases, seventy-seven per cent., and of old cases, thirty-two per cent. Thus furnishing the evidence of another year's experience to the truth of the oft-repeated remark of the comparative curability of recent attacks of insanity, and the diminished probability of recovery when the early periods of the disease are allowed to pass without subjecting the patients to appropriate treatment."

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"Habitual exercise in walking and riding has afforded both occupation and amusement, and has contributed largely to the restoration and maintenance of mental and bodily vigor."

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"And permit me, while bearing testimony to the advantages offered in this

Institution for the relief and recovery of the insane, to suggest the importance of increasing these facilities, as experience may suggest and opportunity offer. Convinced, by every year's experience, of the important advantages resulting from the regular and systematic employment of the patients, whenever they can be induced to engage in active employment, I would particularly urge the importance of providing additional means for that purpose. As the tastes and habits of our patients are various, and many have never been accustomed to manual labor, it is important to present as many varied modes of occupation as possible—that the mind

> 'Of desultory man, studious of change
> And pleas'd with novelty, might be indulg'd.'

Let, then, the erection of suitable workshops for different avocations, and particularly the enlargement of our carpenter's shop, receive early attention. Increased facilities for amusement, also, should never be lost sight of—since, in connection with active employment, we ought ever to look upon them as our most important means of alleviating the wretchedness of our inmates, if not of restoring them to reason. These additions to our present catalogue of moral means of cure, could not fail of producing beneficial effects in the amelioration of the condition of those entrusted to our care, and, in many instances, expediting their recovery."

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ART. XVII.—*The Cyclopædia of Practical Medicine.* Edited by JOHN FORBES, M.D., F.R.S., ALEXANDER TWEEDIE, M.D., F.R.S., and JOHN CONNELLY, M.D. Revised, with additions, by ROBLEY DUNGLISON, M.D. Philadelphia: Lea & Blanchard. 1844.

AMONG the many advantages which attend a cyclopædia of general science, we feel bound to say that they are not participated in to the same extent by a similar form of publication on the various branches of medical science, especially when the contributions are furnished by a large number of individual writers. Such a work, in the still unsettled state of medicine and medical philosophy, must necessarily bear the impress of a multiform and parti-colored character. It must abound in contradictory opinions and views on physiological, pathological, and practical points.

All this must have a most unfavorable effect on the mind of the young practitioner; for when he finds doctrines positively laid down as established on one page, and then upon the next finds an opposite dogma just as sturdily maintained, he rejects them both, perhaps, in disgust; and the next we hear of him is, that he has become an advocate for some new-fangled hypothetical system, or a convert to some of the existing varieties of quackery. For this reason, among others, we regret that the publication of this Cyclopædia, the labor of sixty-seven different hands and heads, has been commenced in this country; for a careful and repeated examination of the work has convinced us that the most that can be said of it is, that it is a ponderous book, in which every collaborator has ridden his own hobby. As each writer was selected in consequence of having made a particular subject his special study, the importance of each will of course be exaggerated; and hence, too, there must necessarily be a want of that harmony which a single mind would have infused into the whole.

We do not pretend to assert that there are not some very clever essays in its pages. Indeed, what else could be expected from such names as Forbes, Pritchard, Tweedie, Connelly, and others, who stand high on the scroll of the medical fame of the living? But we are disposed to deny that many of its writers are practical and experienced physicians; and the names of some of them, we believe, have never been heard of in medicine except through their announcement in connection with this work. They are *novi homines*, to all intents and purposes.

Such are the unavoidable difficulties connected with getting up a medical dictionary on the above plan, that we are satisfied no such work can, or ought to, succeed. If, by any circumstances, it be forced into circulation, its success will be short-lived. Consistency, like fair play, is a jewel in medicine, as in everything else; but it cannot be found in the patch-work labors of three score and ten medical writers, bound between two covers, all thrown together into a hodge-podge, and called a system of "Practical Medicine." System, forsooth! There are at least a score of systems, founded on as many different doctrines, scattered up and down in its pages; and the reader must be a real "eclectic" who can derive any profit from such a chaotic mass.

In the work before us, the articles are of very unequal merit, as would, of course, be expected among such a number of contributors. There are also positive deficiencies; as, for instance, in Part I. before us, the article "Anæmia," notwithstanding the learned American Editor's valuable additions, is still meager and unsatisfactory. It appears, however, that it is not the intention of the American Editor, as he tells us, to supply these deficiencies.

"In so large a work," he says, "composed by so many different writers, it might rationally be expected that the articles would be unequal; and hence, that the attention of the undersigned [Robley Dunglison] would be called to supply marked deficiencies, or to modify what subsequent researches might have rendered questionable. It did not enter, however, into his plan, or that of his publishers, that his additions or modifications should be numerous or extensive."

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ART. XVIII.—*Pharmacologia, being an Extended Inquiry into the Operations of Medicinal Bodies, upon which are founded the Theory and Art of Prescribing.* By J. A. PARIS, M.D. Cantab., F.R.S., Fellow of the Royal College of Physicians of London, etc. From the ninth London edition. Re-written in order to incorporate the latest discoveries in Physiology, Chemistry, and Materia Medica. With Notes by CHARLES A. LEE, M.D., A.M., Professor, etc. New York: Harper & Brothers. 1844. 8vo. Pp. 354.

THE popularity of this book, which first appeared in 1812, is sufficiently attested by the fact that, antecedent to the present American edition, nine editions have appeared in England, and several in this country. To say aught in commendation of this work, which has had perhaps a more extended circulation than any other medical publication of the present century, would be wholly unnecessary. We are told by Dr. Paris that the

work has been entirely re-written, and entirely adapted to the present state of chemical and physiological science; and this was the more necessary as newly discovered medicinal agents and novel preparations have found their way into recent Pharmacopœias; besides, their nomenclature has been radically changed. There is no other treatise in the English language, in which a full and extended view of the philosophy of medical combination is given, nor is there any other from which the true theory and art of prescribing can be satisfactorily deduced. Speaking of the time when this volume first appeared, Dr. Paris says:—

"There were, moreover, several standard works on Materia Medica, and approved systems of Pharmaceutic Chemistry; each of which imparted all the information which the science of the day could afford, with respect to the natural history, sensible qualities, chemical composition, and medicinal virtues of the several articles of the Materia Medica, as well as giving clear explanations of the various pharmaceutical operations by which such bodies might be rendered available as remedies; but here ended their instructions. They placed remedies in the hands of the pupil, but where was the work which would teach him to mix, combine, and direct their application in the form of an extemporaneous prescription? where was the friendly Mentor to point out to the young practitioner the difficulties and dangers of his path? Amid all the perplexities of his novitiate, there is none more embarrassing than that of adapting a prescription to all the circumstances of a particular case with therapeutical propriety and chemical accuracy. On entering his career of practice, he is necessarily abandoned to the alternative of two great evils—a servile routine on the one hand, and a lawless empiricism on the other. It was the want of such assistance to steer my way amid shoals and rocks that, more than thirty years since, first suggested the plan of the present work."

In this edition, the author leaves out the part devoted to the Materia Medica or Special Pharmacology, on account of the excellent works on the same branch now on the table of every intelligent practitioner; such as Pereira's Materia Medica and Christison's Dispensary. In compensation, he offers a much more extended view of that province, which he regards as peculiarly his own, viz.: "THE PHILOSOPHY OF MEDICAL COMBINATION, from which alone can be deduced THE THEORY AND ART OF PRESCRIBING."

In running over the pages of Part I., the Revolutionary History of the Materia Medica, including the topics of superstition, credulity, skepticism, false theory, devotion to authority and established routine, we felt as if we were transferred back to the days of our pupillage. But so complete a metamorphosis has the work undergone, more especially in other parts, that, at first view, we should scarcely have recognized it.

Part II., *On the Physiological and Chemical Action of Medicinal Substances*, contains the author's classification, his views of the *modus operandi* of therapeutic agents, and the indications by which their employment should be guided.

Part III., which is *On the Theory and Art of Prescribing, with Illustrative Formulæ*, opens a rich field for the cultivation of the student and young practitioner. Here the author is quite at home. He adopts and acts upon the sentiment so happily expressed by Mr. Whewell. "It has been common to assert," says Mr. W., "that facts alone are valuable in science; that theory, so far as it is valuable, is contained in the facts; and so far as it is not contained in the facts, can merely mislead and preoccupy men; but it should be known that *facts can only become portions*

*of knowledge as they become classed and connected.*" The points discussed in this part of the volume, viz., the relative value and efficacy of medicines, when administered separately or in combination, and also an exposition of the circumstances requiring these modifications, are of the highest value to the practitioner; for, without them, even the most complete acquaintance with general therapeutics and with pathology, would be comparatively of little avail.

"May we not then," says Dr. Paris, "by carefully analysing the compound productions of Nature, and observing the influence which each element exerts in the combination, as exemplified in her more valuable remedies, reasonably entertain the hope of deriving important hints for improving the arrangement of art, while art, in return, may thus be enabled to modify and adapt to particular purposes the products of Nature; but in every attempt to accomplish such objects, we must be careful how we infringe her laws, since it is only by obeying Nature that we can expect to command her services."

The notes of Dr. Lee, who has earned for himself within a few years the reputation of being the prince of annotators, are to the point, always serving to explain or amplify, in the most happy manner, the topic in the text under illustration. This earnestness in his vocation was well exhibited in his recent edition of Pereira on Food and Diet; and it will be still more effectually displayed in two works now in press, viz.: Guy's Medical Jurisprudence, and Copland's Medical Dictionary.

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ART. XIX.—*The Anatomy and Surgical Treatment of Abdominal Hernia; with numerous Plates.* By SIR ASTLEY COOPER, Bart., F. R. S., Surgeon to the King, and Consulting Surgeon to Guy's Hospital. From the second London Edition. By C. ASTON KEY, Senior Surgeon of Guy's Hospital, and Lecturer on Surgery. Philadelphia: Lea & Blanchard, 1844. Large 8vo., pp. 428.

ANY attempt to portray this great and valuable work, which has now been before the profession full forty years, is wholly unnecessary. The renowned surgical achievements of the late Sir Astley Cooper are not hidden under a bushel, but the impress of his genius has been stamped in marks indelible, upon the current age.

The appearance, at this time, of a new edition, introduced by the author's friend and colleague, C. Aston Key, who is himself distinguished as an able and experienced surgeon, affords the strongest testimony in favor of its real and permanent value. In writing this work, Sir Astley's object was to make a volume strictly anatomical and practical in its plan. In his preface, he tells us, at the outset, that his design is "to describe the anatomy and surgical treatment of abdominal herniæ." Further on he says,

"I have almost uniformly, in the following work, avoided quoting the opinions of authors on this part of surgery. This I haved one, certainly not from any wish to slight or undervalue the labors of some of the most excellent physi-

ologists and practitioners that have adorned our profession, but because it did not form part of my plan to give a history of this branch of surgery, and because I wished to confine myself to the very wide scene of observation afforded by the two noble institutions of St. Thomas's and Guy's Hospital, and to that portion of the practice of this metropolis, which I have been personally able to authenticate. I have, therefore, related no case, and given no remark, to the truth of which I cannot vouch."

More than this need not be said, save a word as regards the plates. The subjects of these were principally taken from the dead body by Sir Astley himself, a few being made from preparations previously in the collection of St. Thomas's Hospital; and to insure their accuracy as faithful copies, the outlines, we are told, have been laid down from an exact measurement of parts. The lithographic plates, in the present volume, are well executed. These numerous plates represent the surgical anatomy of the parts concerned in the several kinds of hernia—the trusses of different constructions for the support of inguinal and femoral hernia—different views of preparations after the operation, illustrating the morbid changes of tissue and position caused by the disease—and lastly they indicate both the dangers of incisions made in the wrong direction, and their comparative safety, if the mode designated by the author is pursued.

So valuable is this excellent work on hernia, and so inaccessible has it heretofore been to the great mass of the profession in this country, that we feel that it is due to Messrs. Lea & Blanchard to express our conviction, that they deserve the thanks of the medical public for this effort in the cause of medical science.

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ART. XX.—*A Treatise on the Diagnosis and Treatment of Diseases of the Chest, Diseases of the Lung and Windpipe.* By WILLIAM STOKES, M.D., M.R.I.A., Physician to the Meath Hospital, etc. Second Edition, with an Introduction and numerous Notes, by the American Editor. Philadelphia: Ed. Barrington & Geo. D. Haswell. 1844. 8vo., pp. 528.

CONSIDERING the well-known reputation of Dr. Stokes as a judicious and eminently practical writer, we deem it wholly unnecessary to do more than point out the general character of this work, with a more special account of what has been done by the industrious American editor.

"In the composition of the work," says Dr. S., "I have kept two great objects steadily in view. Of these, the first is the close connection of the study of physical signs with that of symptoms, so as to illustrate their mutual bearing on diagnosis, and remove that unjust opprobrium thrown on the advocates of auscultation, that they neglect the study of symptoms. In the next place, I have endeavored to simplify the subject as much as possible. A sufficient experience has convinced me, that any man of ordinary education may acquire the power of distinguishing thoracic diseases in a degree sufficient for all practical purposes, without troubling himself with those excessive refinements in the diagnosis from acoustic signs, on which some have improperly prided themselves. I have endeavored to adapt this work to the wants of the practical man, always assuming that he

is familiar with the groundworks of the subject—with the characters and causes of physical signs, as originally taught by Laennec, and more recently investigated in the works of Forbes, Williams, and Clark. Hence, I have not entered at any length into the characters of physical signs, but rather into the art of reasoning justly upon them; for it is in this that most observers fail. It cannot be too often repeated, that physical signs only reveal mechanical conditions, which may proceed from the most different causes; and that the latter are to be determined by a process of reasoning on their connection and succession—on their relation to time, *and their association with symptoms:* it is in this that the medical mind is seen. Without this power, I have no hesitation in saying that it would be safer to wholly neglect the physical signs, and to trust in practice to symptoms alone."

The subjects embraced in this volume are: *Diseases of the Mucous Membrane of the Bronchia; Diseases of the Larynx and Trachea; Pneumonia; Gangrene of the Lungs; Perforating Abscess of the Lung; Cancer of the Lung; Tubercle of the Lung; and Diseases of the Pleura.*

The American editor, who, though anonymous, is obviously Dr. John Bell, has made very considerable additions, consisting of an Introduction, an Appendix, and numerous notes. As Dr. S. says in the above extract that he has "not entered at any length into the characters of physical signs," this deficiency is fully supplied by the American editor, who says that "by the aid of the Introduction and Appendix, the reader is placed in possession of an elementary knowledge of auscultation and percussion, and the various views held just now, on the philosophy of the former of these two means of physical diagnosis."

"Considerable additions," says the American editor, "by notes, will be found on the *treatment of bronchitis; the morbid anatomy of dilatation of the bronchial tubes; dry catarrh—asthma; treatment of chronic laryngitis; pneumonia of children,—its pathology and treatment; typhoid pneumonia; gangrene of the lungs; formation and origin of tubercle,* including its *origin, seat, and connections;* the *symptomatology, etiology, and treatment of phthisis pulmonalis; different species of deformity of the chest after pleurisy;* and *cause of metallic tinkling.*"

The first edition of this treatise, we believe, was also republished in this country; that is, in the "Library," edited by Dr. Dunglison. But the present edition has been much enriched both by the author and editor. No inconsiderable part of the book is made up of Dr. Bell's notes, and it now constitutes one of our most useful treatises on the diseases of the chest, characterized by sound pathology and rational therapeutics.

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ART. XXI.—*An Essay towards a correct Theory of the Nervous System.* By JOHN HARRISON, M.D., Professor of Physiology and Pathology in the Medical School of Louisiana. Philadelphia: Lea & Blanchard. 1844. 8vo., pp. 292.

THIS volume, notwithstanding we may not agree with the author, that he has made a very near approach "*towards a correct theory of the nervous system,*" has impressed us very favorably. It embraces topics worthy of the medical philosopher; and were it only on the ground of the valuable

suggestions and commentaries, both pathological and therapeutic, made by the author in the prosecution of his physiological investigations, we would recommend it to the attention both of the student and the professional reader.

"It will be observed," says the author, "that this work is entitled an *Essay*. It is indeed an attempt—perhaps an unsuccessful one—to bring a large class of phenomena, seemingly the most opposed to the ordinary laws of nature, within the compass of those laws. In this attempt, I am not aware of having violated in any instance the strict rules of inductive logic. I have endeavored to explain—as far as explanation was possible—known facts, upon well-known and received principles:—I have admitted no hypothesis wherewith to cut the Gordian knot, when to untie it was impossible."

* * * * * * *

"It becomes me to add another remark. The affections of the nervous system are of two kinds. The first consists in a corporeal molecular change; the other is psychological. It is obvious that though the first may—nay, does always accompany the latter—these affections have nothing in common; they differ in kind, and differ *toto cœlo*. To explain *sensation*, *thought*, etc., by corpuscular change in matter is impossible: they are ultimate facts, and like all such, incomprehensible, or, rather, are to be known only in themselves. I beg it be observed, therefore, that it is only with the corporeal change which occurs in the nervous system, that this Essay is concerned."

The first chapter is headed "On Transmission," (a rather unusual term), which presents a summary of the phenomena in which the nervous system is concerned. Chapter II. treats of "the nature of the changes undergone." Chapter III. is headed, "on the principles of natural philosophy and chemistry," as more immediately connected with the elucidation of physiological phenomena. He here shows that, as very different properties are found in certain chemical compounds, though composed of precisely the same substances, and in the same ratio, and of the same equivalents, so we ought to expect to see changes in vital parts under the similar circumstances of a slight, and at times of no apparent difference in the quantity and arrangement of matter. Chapter IV. treats "on the manner in which the change is transmitted." Innervation is the subject of Chapter V. In the next chapter, "on certain effects of nutritive action," the author opens with aphorisms expressive of certain leading principles, "the truth of which," he says, "I do not think will be questioned by any one conversant with the present state of physiology." As a specimen, here are the first three:

"*Aphorism* I. Every living being is composed of solid parts, and a fluid, called *nutritive*; and it is by their reciprocal action on each other that the phenomena of life are produced.

"II. The action spoken of, is essentially a *chemical* one, since it results in the transformation of substances into others chemically different. The results, reduced to their simplest expression, are *nutrition* and *secretion*.

"III. Like all other species of chemical action, that of nutrition will be more or less intense, according to the relation which the nutritive fluid and tissues have to each other. That is to say, if either be altered in composition, nutritive action is perverted, and at the same time, according to circumstances, it may be increased or diminished in intensity."

We do not suppose that much would be risked, in the way of loss of reputation, in demurring against the proposition that nutrition and secre-

tion are the results of chemical action. In reply, we would commend to the attention of the author, the papers in this Journal relative to the hypotheses of the chemico-physiological school.

The five remaining chapters are devoted to the consideration of—*Adynamia, Hyperdynamia, Ataxia, Explanation of certain Phenomena upon the foregoing Principles,* and lastly, their *Application to Pathology.* The concluding portion of the volume, nearly one-half, is taken up with an Appendix of three papers, viz., *An Examination of the Electric Theory of Nervous Action,* on *Life,* and on *Absorption.*

We repeat that, if the reader should not be satisfied, on reaching the end of the volume, that he has found the philosopher's stone, "the correct theory of the nervous system," he will, at the same time, find himself rewarded by the perusal of subjects of collateral disquisition. The author evidently has given much attention to this subject, and his book evinces no inconsiderable display of talent.

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ART. XXI.—*Address on Insanity before the New York State Medical Society.* By SAMUEL WHITE, M.D., President of the Society and Senior Proprietor of the Hudson Lunatic Asylum. Pp. 20.

THE management of the insane, within comparatively recent years, has assumed quite a new aspect. Instead of chains and the lash, the prison door is now thrown open, and the maniac is brought forth to the light of heaven. For this result, civilisation is indebted to Pinel, who deserves, for its accomplishment, a monument more durable than brass. Besides, one cause which greatly retarded the pathology of insanity, that is, viewing the question metaphysically to the neglect of corporal phenomena, is now also fortunately removed.

The present essay, both theoretically and practically, we hold in high estimation, as it obviously bears on its face that cast which it only could derive from an intimate knowledge of the subject, based on long experience.

The following is sound doctrine:

"There is no such thing as a diseased mind without its connection with matter. From the intricacy of the cause, and the untowardness of its manifestations, mental pathology has been greatly neglected until within the last quarter of a century. It is now, however, generally conceded by the talented writers abroad, and the able conductors of asylums in this country, that we are to look for the proximate cause of insanity in the physical, and not in the metaphysical, portion of our being. Hence, organic lesion, that which specifically dethrones the intellect, under exciting causes, is a theme demanding our unceasing scrutiny, if happily we may implant one ray of hope where unmitigated anguish reigned."

The author disagrees with Dr. Rush in the opinion that "the cause of madness is seated *primarily* in the blood-vessels of the brain." Dr. White's view is as follows:

"*Irritation* specifically acting on the brain and nervous system, and sympathetically on the vascular, may define the phenomena of insanity. The brain

and nervous system being primarily excited, increased vascular action is its necessary concomitant. Hence increased pulse, turgescence of blood-vessels, and pain in the head, are the ordinary attendants of incipient insanity.

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"Great errors have been committed, also, in post-mortem examinations, by placing *consequence* for *cause*, forgetting that protracted disease had wrought insidiously these physical changes—conclusively proving that the brain is not, in its incipient, but in its chronic stage alone, organically affected. If it were not so, how could we account for the radical cures of nine cases in ten of incipient insanity, under judicious location, with suitable medical and moral treatment. Whereas, disordered functions, by neglect, having taken on diseased structure, little more can be done than palliate and render comfortable. These are self-evident truths, and amply confirmed by every one conversant with the treatment of this malady. Who, then, can answer for the mawkish antipathy of parting for a time with a friend, in imminent danger of becoming incurable? augmenting, in a ten-fold degree, by such neglect, the expense of their support, endangering fatuity, and destroying every prospect of future enjoyment or usefulness."

In conformity with the phrenological doctrines, Dr. W. says—

"As the cerebral part of the brain may be considered the seat of the primitive faculties, and the cerebellum of the animal passions, so are we to look for the varied external causes of insanity, as they preponderate or impair these distinct functions."

Upon the subject of treatment, our author's remarks are very judicious:

"Copious abstractions of blood should ever be avoided in insanity as endangering dementia. Very few are the cases of insanity, even in its incipient stage, that admit of venesection. In such only as are plethoric and in the vigor of life, is it admissible at all, and then only in a cautious degree. The pulse is deceptive, for though there may be increased impetus of blood in the carotids, yet they will be found compressible, and the radial artery feeble in its action, showing an unequal distribution rather than congestion. In such cases where symptoms seem urgent, topical blood-letting, by leeching or cupping, may safely be resorted to without danger of collapse. In the treatment of six hundred cases, venesection has not been resorted to in more than one in a hundred, after they entered the Institution, and then only moderate in quantity. Many, however, have been brought to the Asylum, after two or three copious bleedings, undoubtedly with the best intentions; yet the results have proved a prostration of the vital energies, more difficult to overcome than the original disease."

In puerperal insanity, he thinks bleeding wholly inadmissible. In insanity, generally, active emetics he also regards as seldom allowable, unless there is great derangement of the digestive organs. In such cases, an alternate treatment of blue mass and ipecacuanha is adopted. Instead of using drastic purges, he advises the use of laxatives. As regards narcotics and sedatives, opium, camphor, morphia, stramonium, conium, belladonna, and aconite, though requisite to be used with great caution, are often of much service.

"These are often improved by combination with other remedies. For instance, opium, ipecac, and soap, equal parts, forms a pill much easier given than Dover's powders. Camphor mixture, with half a grain of tart. antimony, and five drops of laudanum to the ounce, given in half ounce doses, is a powerful sedative and adjuvant in allaying nervous excitement. Morphia with colchi-

cum, when there is a gouty or rheumatic diathesis, endangering metastasis, is a valuable auxiliary in treatment. Stramonium acts specifically on the sensorium, stimulating the absorbents. A saturated tincture of the seeds in camphor mixture is the best mode of administering it. Conium is the best combined with the different preparations of iron. Belladonna and aconite are often improved by combination. Extracts of these vegetables can only be relied upon when evaporated by solar heat."

Counter-irritants and warm bathing are also regarded as of the highest efficacy.

"In the second stage of insanity, a more tonic treatment becomes necessary, and it is to be regulated according to the age, constitution, and temperament of the patient. The various preparations of iron, mineral acids and quinine, nitrate of silver, followed with a solution of iodine to prevent a discoloration of the skin, conjoined with suitable moral treatment, will often decide the future prospects and destiny of the patient."

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ART. XXII.—*Anatomical Atlas, illustrative of the Structure of the Human Body.* By HENRY H. SMITH, M.D., under the supervision of WILLIAM E. HORNER, M.D. Lea & Blanchard: 1844. Part II. 91 Figures.

WE were much pleased with Part I. but the Second Part gratifies us still more, both as regards the attractive nature of the subject (*the Dermoid and Muscular Systems*), and the beautiful artistical execution of the illustrations. We have here delineated the most accurate microscopic views of some of the tissues; as for instance, the cellular and adipose tissues, the epidermis, rete mucosum, and cutis vera, the sebacious and perspiratory organs of the skin, the perspiratory glands and hair of the skin, the hairs and nails. Then follows the general anatomy of the muscles, and lastly, their separate delineation.

We would recommend this Anatomical Atlas to our readers, in the very strongest terms.

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ART. XXIII.—*Drawings of the Anatomy of the Groin; with Anatomical Remarks.* By W. DARRACH, M.D., Professor of the Principles and Practice of Medicine in the Medical Department of Pennsylvania College, etc. Philadelphia: Lindsay & Blackeston. 1844. 8vo. pp. 128.

THIS work consists of four well-executed plates, and 128 pages of explanatory matter. The original drawings were executed by M. Chasal of Paris, from dissections made by the author, in the *Pavilions de l'Ecole de Medicine*, during the winter of 1820. In the present edition, they are reduced in size.

The object of the author is to add something to pathology and to precision in practice; and in this laudable effort, he has not been without success.

ART. XXIV.—*The Position and Prospects of the Medical Student; an Address delivered before the Boylston Medical Society of Harvard University, January* 12, 1844. By OLIVER W. HOLMES, M.D.

*Address to the Graduates of Geneva Medical College. Delivered January* 23, 1844. By JAMES WEBSTER, M.D., Professor of Anatomy in Geneva Medical College.

*Valedictory Address, delivered before the Graduates of the Medical Department of Pennsylvania College, Session* 1843–4. By HENRY S. PATTERSON, M.D., Pofessor of Materia Medica and Pharmacy.

WE have read Dr. Holmes's Address with much pleasure, which has been interrupted only by the regret that we cannot enable our readers to enjoy the same satisfaction. He writes in a noble strain (as well he might, seeing that his name is in Griswold's book of American poets), holding captive the mind of his reader, as we presume he also did that of his auditors. He tells us that, at no period of the history of medicine, have the different branches of the science ever presented themselves to the medical student in a manner more adapted to kindle his zeal and energies, than at the present time. He depicts in glowing language the application of the Microscope to anatomy and physiology, and the progress of Chemistry in its application to the phenomena of life. Peculiar to the age are also Pathological Anatomy, Auscultation, and Medical Statistica. As regards various practical improvements in the different branches of our art, he remarks:

"The simplification of prescriptions, the isolation of the active principles of many vegetable products, the introduction of new and useful remedies into practice, are matters of interest, but these may be considered as a part of the steady growth of knowledge, and hardly as marking an epoch of progress. The same remark may be applied to the improvements in mechanical surgery. Strictly speaking, this art may be susceptible of continual improvement, in the same way as watch-making or printing; but that each of these pursuits has pretty clearly shown all its essential capabilities, will be generally conceded. We would not undervalue the recent achievements of ingenuity in the invention of subcutaneous operations and the revival and improvement of plastic surgery."

From his very happy remarks upon the position and prospects of the medical student, more especially at his entrance upon the active duties of his profession, we make the following truthful extract;

"You are to enter upon your professional duties at a time which offers some peculiarities affecting your interests and comfort. Society is congratulating itself, in all its orations and its periodicals, that the spirit of inquiry has become universal, and will not be repressed; that all things are summoned before its tribunal for judgment. No authority is allowed to pass current, no opinion to remain unassailed, no profession to be the best judge of its own men and doctrines. The ultra-radical version of the axiom that all men are born free and equal, which says, 'I am as good as you are,' and means, 'I am a little better,' has invaded the regions of science. The dogmas of the learned have lost their usurped authority, but the dogmas of the ignorant rise in luxuriant and ever-renewing growths to take their place. The conceit of philosophy, which at least knew something of its subjects, has found its substitute in the conceit of the sterile hybrids who question all they choose to doubt in their capacity of levellers, and believe all that strikes their fancy in their character of reverential mystics. This is the spirit which you will daily meet with applied to your own profession, and which might condense its whole length and breadth into the fol-

lowing formula: A question involving the health and lives of mankind has been investigated by many generations of men, prepared by deep study and long experience, in trials that have lasted for years, and in thousands upon thousands of cases; the collected results of their investigations are within my reach: I, who have neither sought after, reflected upon nor tested these results, declare them false and dangerous, and zealously maintain and publish that a certain new method, which I have seen employed once, twice, or several times, in a disease, of the ordinary history, progress, duration and fatality of which I am profoundly ignorant, with a success which I (not knowing anything about the matter) affirm to be truly surprising, is to be substituted for the arrogant notions of a set of obsolete dogmatists, heretofore received as medical authorities."

The valedictory addresses of Drs. Patterson and Webster are also choice productions, each being peculiarly appropriate to the occasion. As that of Dr. Webster records a very unusual circumstance, perhaps one that never occurred before, viz., the medical graduation of an Aboriginal —one of the Senecas—we will here give room for the extract:

"In conclusion, it must be a most extraordinary occasion which could induce me to single out one from among you as a subject of comment; but the peculiar circumstances will, I trust, be an apology to him and to you. Look around upon this assemblage come up to this solemn temple to bear witness to your professional vows—associate in your mind the place and the occasion—then remember that there is one among you, almost the last remnant of a race fast fading away; one who is 'native and to the manor born;' in whose veins courses the blood of a long line of distinguished chieftains, once the rightful and undisturbed possessors of the very soil we occupy. What a spectacle of moral grandeur does he present in his history, his object and his aims! Born without those advantages it has been your lot to know, this native son of the forest was early brought to the knowledge of his Creator. Leaving now the allurements which are spread before and around him, he goes forth among his own people, in the true missionary spirit, to devote the energies of a vigorous and cultivated mind to the diffusion of the truths of revelation—to teach the plan of salvation—to cluster around him, the associates of his boyhood, the youthful and the aged of his tribe, at the altar of the Christian's God—and in humble imitation of the example of his divine Master, to unite in his mission, the power to heal their diseases, to minister to their sufferings, and to relieve their infirmities.

"Need I say more to you, than that the influence of such an example must not, cannot, be lost upon you! Cherish, therefore, the recollection of your old associate, and hereafter the remembrance of the Seneca will revive the scene now passing before us, whilst the silent appeal which his example makes to every one of you, will find an answering echo in your bosoms."

# PART THIRD.

## 1.

# Foreign Medical Intelligence.

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### ANATOMY AND PHYSIOLOGY.

1. *On the Formation of Wax, in reference to the Theory of Nutrition.* By Mr. Milne Edwards. (*Comptes Rendus des Séances de l'Academie des Sciences*, 18th September, 1843.)—Huber, the celebrated entomologist, by confining bees in a close hive, and feeding them with pure honey or sugar, found that they continued to construct the honeycomb as if they had been allowed to get access to flowers. He therefore inferred, that bees possessed the power of converting honey into wax. M. Griendlach, of Cassel, more recently attempted to prove the same point. As this fact seemed to be opposed to the theory of nutrition, as advanced by MM. Dumas, Boussingault, and Payon, M. Dumas, with the assistance of Mr. Milne Edwards, repeated the experiment. They analyzed a few of the bees before the experiment, to ascertain what amount of fat their bodies contained, and again at the end of the experiment, to see whether any fat was lost. They satisfied themselves that bees, when shut up and fed with sugar or honey, continue to secrete wax; and therefore infer that they possess the power of converting saccharine matter into wax. Mr. Edwards, however, is far from thinking that this interferes with the general truth of the conclusions arrived at by Dumas, viz., that animals do not in general possess the power of converting one substance into another of a different chemical composition, provided that the other is intended to form a constituent portion of the body. Wax, however, is a true secretion, and, in this respect, resembles the bile or other secreted products, and does not come under the same laws as those substances which are intended to form part of the animal body.—*Edinburgh Medical and Surgical Journal.*

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2. *Nutrition of Animals with Sugar.* By M. Chossat. (*Comptes Rendus des Séances de l'Academie des Sciences*, 16th October, 1843.)—To ascertain the effects of a diet of sugar, M. Chossat made seventeen experiments on pigeons and turtle-doves, and the phenomena observed during life were as follows:—

1. At the beginning the animals remained calm; but after a while, uneasiness was observed; and toward the end of life, stupor and prostration of strength, sometimes interrupted by convulsive movements.

2. The sugar was sometimes absolutely refused; often, also, it was ejected by vomiting.

3. The evacuations were sometimes very abundant, at other times were more moderate in quantity. More rarely still, they were in less than natural quantity. They were in general liquid and bilious.

4. The respiration was sometimes natural during the greater part of the experiment; at other times, and that only during a part of the experiment, it was observed to be more or less short, impeded and sibilant.

5. The animal heat was first maintained at a natural elevation, but later in the experiment it fell, and before death was very low. In other cases, however, it was notably elevated, and when death occurred, the animal heat was greater than natural.

6. All the experiments terminated in death, which seemed to take place by a

kind of asphyxia. The lungs were found œdematous, and the brain and spinal marrow strongly injected with bluish-black blood.

M. Chossat also subjected nine pigeons to a diet of sugar, for the purpose of ascertaining whether this substance contributed to the production of fat. He ascertained that a sugar diet sometimes contributes to the formation of fat, sometimes of bile. That in those cases where there is a tendency to the formation of fat, there is a greater or less amount of constipation; but when to the formation of bile, there is diarrhœa. From this, it may be presumed that, during a sugar diet, we may have it in our power to favor the formation of fat at will, by inducing a costive habit of body.—*Edinburgh Medical and Surgical Journal.*

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3. *On the Extirpation of the Spleen and Thyroid Gland.* By Dr. Bardeleban, of Berlin.—Since the publication of my experiments on the effects produced by the extirpation of the spleen and thyroid gland, I have repeatedly performed the operation on dogs, cats, &c., and these experiments have led me to conclude—1° That the extirpation of the spleen in animals which survive, does not seem to affect their health. My experiments were performed on dogs, cats, rabbits, and guinea pigs. All the rabbits died of peritonitis, owing to the depth at which the spleen is situated. 2° That the animals are not more voracious than before the operation. 3° That the organ never grows again. 4° That dogs and rabbits, from which the thyroid gland had been removed, offered no difference, except in one case, in which it was performed on a rabbit, when venereal desire was increased; the which is deserving of notice, as the contrary was said to be the fact. 5° That animals deprived of both, offer no functional disturbance; but as both operations are very dangerous, we must not expect them to succeed often; and among the many cases in which I performed them, only one dog recovered; and it is sufficiently interesting to be quoted. The spleen was extirpated on the 10th July, 1841, and, a month after, the thyroid gland; no consecutive accident took place with the exception of a phlegmon on the neck; at the present moment it is perfectly well, and it is impossible to discover any difference between it and other dogs of the same species. 6° That contrary to the opinion of certain physiologists, the extirpation of the spleen does not decrease the desire of the union of the sexes; and as to its rendering the animal incapable of fecundating the bitch, I have a proof of the contrary, in an animal about to pup 7° That the volume of the spleen is always greater where the organ is removed when the stomach is full, than when empty; owing to the quantity of blood contained in its issue.—*London Medical Times.*

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### MEDICAL PATHOLOGY AND PRACTICAL MEDICINE.

4. *Epidemic Fever prevailing in Edinburgh, Glasgow, Dundee, and other Towns of Scotland.*—This disease, like that of Rondout in our own State, seems to have taken its origin in an epidemic Influenza; and what affords the most striking analogy, is, that it finally assumed a character having a marked resemblance to Yellow Fever. It was first called *Influenza*, then *Yellow Fever*, as also *Spotted Fever* and *Common Typhus*. The foreign medical journals give long and interesting accounts of the epidemic, but our limited space just now precludes anything but the merest notice. The following extracts are from the "London and Edinburgh Monthly Journal of Medical Science:"

"One of the most common symptoms in the highly congestive form of the disease, is yellowness of the conjunctivæ, and of the whole surface of the body. It generally appears between the third and seventh day, and is always most intense on the face, neck, chest, abdomen and thighs. The hue of the

neck and chest is the most vivid; then comes, of equal, or nearly equal brightness, the abdomen; then, somewhat fainter, the thighs; then, considerably paler still, the legs, arms, and fore-arms; the hands and feet get their color later, always to a much less extent, and sometimes not at all. The yellowness occasionally appears during the relapse, and not in the first attack. I have seen it present in both.

"Associated with the yellowness, there are generally depression, less or more delirium, dusky, and often porter-colored urine, black melæna-like stools, and hemorrhages from some of the mucous membranes. In the worst of the cases, black coffee-ground-like matter is ejected from the stomach, and passed per anum.

"In some cases, the black vomit occurs without the yellowness; and, on the other hand, at the autopsy of yellow patients who have had no black vomit, this matter has been found in the stomach, and other parts of the alimentary canal.

"Enlarged liver and spleen, and tender and tympanitic abdomen, are less constant, but still very usual symptoms in cases characterized by yellowness or extreme congestion. Difficult micturition has been complained of by several of my yellow and purple patients.

"A deep persistent purple color of the face, appearing before, or immediately after the invasion of the disease, is a certain prognostic of danger, and is seldom absent in those destined to be yellow."

At Dundee, yellowness of the skin and black vomiting were quite common in the disease; and the frequency of these symptoms, as well as the duration of the disease, may be ascertained from the following table, which presents all the cases that terminated fatally in the Dundee Infirmary:

| No. | Name. | Sex. | Age. | Day of the Disease on which Patients died. | |
|---|---|---|---|---|---|
| 1 | D. Y. | M. | 60 | 12th. | Skin yellow, black vomit. |
| 2 | J. A. | M. | 43 | 11th. | Skin yellow, no vomit. |
| 3 | W. P. | M. | 55 | 15th. | Skin yellow, no vomit. |
| 4 | W. B. | M. | 28 | 11th. | Skin yellow, brownish bilious vomit. |
| 5 | J. G. | M. | 33 | 17th. | Skin yellow, no vomit. |
| 6 | D. M. | M. | 64 | 9th. | Skin yellow, brownish bilious vomit. |
| 7 | M. W. | F. | | | Skin yellow. |
| 8 | R. A. | M. | 69 | 11th. | Skin yellow, black vomit. |
| 9 | T. R. | M. | 44 | 15th. | Skin yellow, black vomit. |
| 10 | M. N. | F. | 25 | 14th. | Skin yellow, black vomit. |
| 11 | M. F. | F. | 23 | | Skin yellow. |
| 12 | M. M. | F. | 30 | 11th. | Skin yellow, black vomit. |
| 13 | J. B. | M. | 40 | 9th. | Skin yellow, no vomit. |
| 14 | J. R. | M. | 36 | 15th. | Skin yellow, black vomit. |
| 15 | C. M. | F. | 39 | 7th. | Skin yellow, no vomit. |
| 16 | W. M. | M. | 60 | 8th. | Skin yellow, no vomit. |

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5. *Masturbation.*—Professor Rignoli, of Pisa, thinks that he has observed in cases of women who were addicted to this disgusting habit, that the finger used for that purpose becomes covered with warty vegetations, and that the posterior lip of the womb gets to be considerably enlarged; indeed to such an extent, that it sometimes forms a tumor so large as to require excision, and which has been mistaken for a polypus or a cancer. In some of these cases warts will

likewise be found on the vulva, similar in character to those which are developed in the same situation in cows which have been recently covered. Burdach, who noticed the same facts, attributes the phenomena to the action of the plastic juices secreted during venereal excitement.—*Italian Journal.*

6. *Prevention of the Contagion of Syphilis.*—The problem of the means of extinguishing syphilitic contagion, appears to have been solved at the hospitals of St. Petersburg. In principle, it appears simple enough, the point to be effected being merely to prevent the absorption of muco-purulent matter, either by means of washings, which remove it directly, or by liquids, such as the chloride of lime, which have the property either of decomposing it, or of preventing otherwise its inoculation. In practice, however, it proves a matter of great difficulty, especially in the female. In St. Petersburg, the most satisfactory results are said to have followed the use of the prophylactic soap of Dr. Pfeffer. The active ingredients of this soap appear to be—in 500 grains of the substance, 6 grains of the bichloride of mercury, 4 of tannin, and 45 of chloride of lime, incorporated into a soap with soda.—*Annales de Thérapeutique*, Nov. 1843. from the *Lon. and Edin. Monthly Jour. of Med. Science*, March, 1843.

7. *Syphilis.*—M. Ricord, in the *Prov. Med. Journ.*, expresses his opinion that syphilis, like small-pox, occurs generally but *once* in the same individual; and he explains its reappearance, by saying that, so frequent is a relapse, that it may be fairly questioned, whether the syphilitic diathesis, once established, can ever afterwards be completely eradicated. This is one of those extraordinary statements to which neither the profession nor the public will lend credence; it is manifestly contrary to common sense and experience. As well might it be said that a man's appetite never occurs but once, but when the *appetite* diathesis has been excited, it can never be completely eradicated.

*Secondary Syphilis.*—Secondary syphilis, according to Ricord, is always a chronic disease, and its diagnosis is generally easy. It rests chiefly upon two points; first, the antecedent history of the primary infection; and, secondly, the physical characters of the secondary symptoms themselves. On one symptom alone can a positive diagnosis be made, without any reference to the primary infection; that is, the mucous papulæ, the appearance of which is so characteristic as to leave no doubt whatever of the nature of the case.—*Medical Times*, March 30, 1844.

8. *M. Velpeau's Experience with Nitrate of Silver in Diseases of the Eye.*—1. Nitrate of silver is the best topical application that can be employed in a great number of acute and chronic affections of the eye.

2. In the various forms of blepharitis it should be used as an ointment.

3. In inflammations of the eyelids it is most advantageously applied in the solid form.

4. In slight inflammations of the conjunctiva a solution of from five to fifteen centigrammes of nitrate of silver to thirty grammes of water are generally sufficient.

5. In purulent conjunctivitis the dose may be increased from two grammes to thirty grammes of water.

6. The use of the solid nitrate of silver may also be beneficial, but is hazardous.

7. It is always very advantageous, in the treatment of conjunctivitis, to alternately increase and diminish the dose of nitrate of silver.—*Dublin Med. Press.*

9. *Pneumonia in a Child of Eleven Months.*—Mr. Adams presented the recent specimens, taken from the body of a child eleven months old, which had died of acute pneumonia. It lingered but five or six days under this illness. The surface was very pale, yet the skin was intensely hot, and there was a short, painful cough. On the second day of the attack, the right lung was already solidified up to the clavicle; the left was still permeable, and the respiration

puerile. On the third day, the respirations were 62, and the pulsations 170 in the minute. On the next day, the respirations were 72, the pulsations 200. When the chest was laid open, after death, some petechial spots were observable on the surface of the right lung, not unlike those met with in purpura; the lung did not crepitate; it looked more like spleen than lung; it sunk in water, and had the appearance and blue color, as well as the density, of the fœtal lung. This was a circumstance of importance to the medical jurist. Mr. Adams produced a drawing of a specimen of the same disease, that he had communicated at a former meeting. The subject in that case was a child who had inhaled very hot steam from the spout of a kettle; œdema of the glottis ensued. Tracheotomy was performed, and relief obtained; but pneumonia, much resembling that in the present case, came on, of which it died four days after the accident.—*Proceedings of the Pathological Society of Dublin.* From the *Dublin Journal of Med. Science.*

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10. *On the Rarity of Consumption in Marshy Countries.* By M. Nepple of Lyons. (*Bulletin de l'Academie Royale de Medicine*, 7th November, 1843.)—In an interesting communication to the Royal Academy of Medicine, M. Nepple has brought forth evidence to prove that phthisis is a very rare disease in marshy countries. He states that, from the year 1818 to 1829, during which he practised in the marshy canton of Montluel, he was struck with the small number of consumptive, scrofulous, and even goitrous individuals he met with. On investigating the subject more minutely, he found that the more marshy the district, and the greater the number of stagnant ponds and morasses, the more rarely did he observe any traces of these diseases in the farmers and laborers of the district.

To obtain more numerous facts, he wrote to several of his medical brethren in the surrounding cantons, to ascertain whether the same fact had been observed by them. M. Duteche, physician in the canton of Chalamont—a canton much fuller of ponds and marshes than that of Montluel—wrote in answer, that he had never seen phthisical or scrofulous individuals in the communes of Marlieux, Versailleux, Lachapelle, or Saint Nizier-le-Desert, all situate in the Pays de Dombes, where the stagnant marshes are very numerous, and the population very unhealthy. He added, that so convinced was he of the advantages phthisical patients would derive from a residence in such localities, that he purposed to establish a *maison de santé* in an ancient chateau which had been abandoned by its proprietor on account of its general unhealthiness.

M. Pacoud of Bourg, during the course of a practice of forty-five years, had not met with a single case of phthisis during all that time. The hospital of Bourg, which receives its patients from all the surrounding marshy districts, does not contain in its records the history of even a single case of this disease. M. Pacoud adds, however, that children who are boarded away from home, and consequently leave those marshy districts in early life, are occasionally affected with consumption, but removal to the marshy district does not appear to remove the disease. Dr. Hudelet of Bourg bears witness to the same fact of the infrequency of phthisis in the marshy districts of Villars, Marlieux, Saint-Nizier; he never saw a single case of that disease.

Dr. Monfrin, physician to the Hospital Chatillon-les-Dombes, states that phthisis is very rare in the country of the Dombes; for three years that the Mayor of Chatillon and he kept registers of the deaths in the town, out of 400 deaths, including those in the hospitals, only eight were from phthisis, and one of these was a stranger. The canton of Chatillon, it may be remarked, is not situated in the most marshy district of the Dombes.

MM. Rater and Candy of Lyons, who had formerly practised in the marshy plains of Forez, bear evidence of the rarity of phthisis in that locality. M. Candy, however, stated that it has become more frequent of late years since several of the marshes have been drained.

M. Jolly concurs in the statement as to the rarity of phthisis in the marshy district of Arcachon.

From all these authentic facts M. Nepple concludes that it is impossible to

doubt the fact of the rarity of tubercular diseases in marshy districts, whatever explanation may be given of its cause.—*Edinburgh Medical and Surgical Journal.*

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11. *On Blistering by Nettles in Measles.* By M. Trousseau. (*Journal de Medecine*, September, 1843.)—M. Trousseau recommends the free application of nettles to the surface of the skin in cases where measles or other eruptive diseases have receded and lead to the production of severe symptoms. He has seen this means succeed when every other had failed. In the case of a girl on whom the eruption of measles disappeared, producing a severe attack of bronchitis, leeches and active emetics failed to bring back the eruption or ameliorate the symptoms. Her whole body was then freely threshed with a bunch of nettles, and, within a few hours after, the eruption had fully returned, and with it every disagreeable symptom disappeared.—*Ibid.*

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12. *Cochineal a Specific in Hooping-Cough.* By M. Cajetan Wachtl of Vienna. (*Schmidt's Journal*, vol. xxxix., p. 65.)—In consequence of seeing in an English paper the receipt for a very old English specific for hooping-cough, M. Wachtl was induced to try it. The receipt was—cochineal 15 grains, carbonate of potass 15 grains, sugar 1 ounce, and water 6 ounces. A tea-spoonful was given three times a day. Nine cases of hooping-cough are related, in which the medicine produced a cure in from two to eleven days, diminishing the number of fits from the first day it was taken. In Scotland, the above mixture has been used from time immemorial, but is made much stronger, viz., cochineal 10 grains, salt of tartar 20 grains, water and simple syrup of each half an ounce; a teaspoonful to be taken four times a day.—*Ibid.*

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### PATHOLOGICAL, THERAPEUTICAL, AND OPERATIVE SURGERY.

13. *Luxation of the Eye and Fracture of the Superior Maxillary.*—A poor woman, of advanced age and deaf, was knocked down in the streets of Paris and run over by a cabriolet, one of the wheels passing over the left cheek. She was immediately transported to the Hôtel-Dieu, where, on examination, M. Blaudin found the eye hanging on the cheek, the floor of the orbit was mashed into innumerable pieces, as was likewise the body of the superior maxillary bone; the soft parts were dreadfully lacerated and contused, except the eyelids, which were uninjured. After extracting some detached fragments of bone, the wound was dressed and the eye returned to the orbit, where it was maintained with a suitable bandage. Numerous fragments of bone have since come away, and the wound suppurates freely. The eye has retained its position, and the patient is able to see light. The transparency of the cornea remained unaltered. The surrounding soft parts are very much swollen and œdematous, and the cheek and upper lip appear to be paralysed.

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14. *Cancer of the Breast in a Male Subject.*—We find the following case related in a recent number of the *Annales de Thérapeutique*:—A man, about fifty years of age, small, of a full habit, with soft flesh and rounded form, and presenting somewhat of a feminine appearance, was troubled with a carcinomatous tumor of the right breast, about the size of a large hen's egg. The tumor was hard to the touch, moveable, slightly flattened, and of an unequal surface, but not ulcerated. A portion of it, the size of a hazel-nut, was, however, soft and of a violet color, and would, in all probability, have soon ulcerated. The general appearance of the tumor was similar to that of a firm breast of a young girl; the patient complained of no pain; the adjacent ganglions were

not enlarged; no pain or numbness of the arm; general health good; had only noticed the existence of the tumor during the last six months. The father of the patient is still living, and eighty years of age, with health unimpaired. Neither his mother nor any other member of his family has ever had a cancer. Shortly after being admitted into the Hôtel-Dieu of Paris, M. Blandin removed the tumor, which was found, on dissection, to belong to the genuine schirrous variety. The wound healed by the first intention, and the patient was soon after discharged cured.

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15. *The Powers of Adhesive Inflammation.*—A man, who was engaged in sawing wood, separated, with the saw, the last phalanx of the left thumb. The bone was entirely divided, and the parts were only connected by a very small portion of skin. It was immediately applied to the stump, and secured with adhesive straps and a bandage; and, in a short time, it was found to have united perfectly. The patient was young and of a good constitution.—*Annales de Thérapeutique.*

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16. *Caries of the Vertebræ,*—Doctor Lees produced recent specimens illustrative of the pathology of this disease. The first case occurred under his care in the Hospital of the South Union. The subject was a child aged five years, which was brought under his notice for the first time about six months ago, in consequence of having been observed to stand crooked or bent towards one side. On careful examination of the spine, a slight projection was discovered at the lower part of the cervical vertebræ. An issue was inserted in the neck, and the usual remedies directed. However, the child's health gradually declined, the pulse became greatly accelerated, and during the last week it died, laboring under diarrhœa and lobular pneumonia. It had always complained of pain in the front of the chest, but never of any in the back. There was paralysis of motion of the upper and lower extremities, without rigidity of the muscles. The fæces and urine were discharged involuntarily. The body was inspected after death; the bodies of the five upper dorsal vertebræ were completely carious, and the intervertebral substance destroyed; the sixth and seventh were quite black and rough; the body of the ninth was very vascular; the intervertebral substance between the seventh and eighth was quite sound. The theca of the medulla spinalis was quite thickened, and very vascular; the medulla itself was quite yellow and softened. It was remarkable that in this case no abscess had been formed, though so many vertebræ were engaged. There was no deposition in the diseased vertebræ, and no tubercles in any of the viscera.

The next specimen Dr. Lees had to present was sent to him by his colleague, Mr. Shannon. The subject was a man of strumous habit, who had died of phthisis; he was also paralysed; his lungs were found to be loaded with tubercles; the three last of the dorsal and the first of the lumbar vertebræ were diseased; there was a cheesy deposition in the substance of the bone, and also between the ligaments and bodies of the vertebræ; the spine in this situation was bent to a considerable angle, and the canal was enlarged at the angle of the curvature. This was a good specimen of the scrofulous form of the disease.—*Proceedings of Path. Soc. of Dub.*, from *Dublin Journal of Med. Science.*

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17. *Inoculation of Veratrine in Neuralgiæ.*—M. Lafargue transmitted to the Academy an account of the good effects he had obtained in facial neuralgia from the inoculation of veratrine. The veratrine is mixed with a drop of water, so as to have a suitable consistence, and is then introduced exactly as in inoculation with the vaccine virus. Directly on the operation being performed, the patient experiences a pricking sensation in each puncture similar to that caused by reiterated pricks of a needle; this sensation begins to lessen after the lapse of ten minutes, and disappears in about an hour. M. Lafargue repeats the operation night and morning, making about a dozen punctures at the point where the pain is most severe. In limited paralysis, especially of sensation, the same proceeding is very advantageous.—*Gazette Med. de Paris*, from *Dub. Med. Press for* March, 1844.

OBSTETRICS AND DISEASES OF FEMALES.

18. *On the Periodical Deposition of Ova by Women and the Females of the Mammalia.* By M. Raciborski. (*L'Experience*, November and December, 1843.)—In a series of most interesting papers, M. Raciborski proves that women and the females of all the mammalia throw off, at particular periods, ova, which may be detected in the oviduct (Fallopian tubes). The period at which this takes place in animals is known by the name of the rutting season: in woman it occurs every time when she menstruates. By tracing the character of the Fallopian tubes and of the ovaries through the races of animals, he was able to show that these tubes are truly oviducts, and were similar in function to the oviducts of birds. In the course of inquiry, and as the result of numerous dissections, he distinctly proved, as Bischoff of Heidelberg had also done, that, during the period of menstruation in women, and of rutting in the mammalia, ova became developed in the ovaries, just as happens in fishes or birds, and are thrown off at that period. In uniparous females only one ovum is so developed; in those who are multiparous several ova are thrown into the Fallopian tubes or oviducts. This takes place independent of fecundation. In fact, fecundation only vivifies the ovum which is thrown off, in the same way as occurs in birds. Provided the male semen reaches the ovum before it has reached the uterus, impregnation takes place; but if there be no fecundation, as occurs in all virgins, and in animals which have not access to males, the ovum is thrown off, or laid, as he terms it, in the same way as we see the unfecundated ovum of birds or fishes laid.

The Graafian vesicles are minutely traced through all their periods of change, from the time when they appear in the interior of the ovary, until they gradually approach the surface of that organ, ready to be thrown off at the period of rutting or of menstruation. As they approach the surface in animals, each is seen to be composed of a vesicle filled with a tolerably limpid viscous fluid, of a somewhat yellow tinge. The walls of this vesicle are formed of four membranes—the peritoneum and covering proper of the ovary forming two of them, and only cover its projecting surface. The third tunic is the most important, forming the membrane proper of the Graafian vesicle. It forms a completely closed vesicle, and encloses numerous vessels. Its internal surface is free, slightly tomentose, and is in contact with a granular fluid. It adheres to the two first coats by loose cellular tissue. The fourth coat is a cellular one, which envelopes the last described membrane on all sides, excepting on its upper projecting one, where it is covered by the two first coats. These coats are all closely applied to one another, and leave no space or fluid between them. As the period of rutting or menstruation approaches, the most superficial vesicles augment considerably in volume, and lose their diaphanous appearance, on account of the increased thickness of the third or membrane proper of the vesicle. At the same time, the liquid becomes more granular than before. At the rutting or menstrual period congestion takes place, and often hemorrhage, within the interior of the vesicle. If cut at this period, the vesicles give out a bloody-colored fluid, floating in which may often be distinguished the ovum proper. In a few days after the rutting or menstruation has commenced, if the female be kept carefully from the male, the vesicle bursts and evacuates its contents. If examined a few days after this, a slight cleft aperture may be distinguished on the surface, but the edges are already re-united. The pouch of the follicles is then seen sensibly diminished in size, and often contains a few small clots of blood.

The changes which this pouch undergoes is one of the most curious of the phenomena. After the rupture of the follicle the external or fibrous coat contracts, and folds up irregularly this membranous proper tunic of the follicle. It then resembles a bladder pushed into a cavity much less than itself. The sides are pressed irregularly one against the other; and as they at length adhere by their oppressed surfaces, a fleshy mass is found occupying the space of the former Graafian vesicle. This mass presents then the color and consistence of the liver, and when incised, presents a ragged aspect, produced by the change just described. In some cases, the internal cavity is not quite obliterat-

ed, on account of a few of the clots still remaining. These fleshy masses may be easily drawn out of their situation by a pair of forceps, exactly in the same way as the internal membrane of the vesicle might have been before the menstrual or rutting period took place.

In proportion to the time which has elapsed since the rutting period, and in proportion as new Graafian vesicles approach the surface of the ovary, the fleshy masses above described diminish in volume, and assume a fawn color, or that of a decayed leaf. The ragged aspect on a section is not so distinct; they become deeper and deeper placed in the ovary, and are at last only met with as small fawn-colored tubercles. These diminish more and more, till first only a fawn-colored speck is seen, and then they disappear.

In the course of the long series of papers which M. Raciborski has published on this subject, are cited very numerous cases, in which all the facts mentioned were observed on the bodies of women who died during or immediately after or before menstruation, and in the females of animals in the rutting period. They fully bear out M. Raciborski in the view he has adopted, viz., that in uniparous animals one ovum, and in multiparous animals several ova, are developed every time the animal comes into heat, and are thrown off independently altogether of the animal having access to the male; that the same occurs in women every time they menstruate; that Graafian vesicles, therefore, are to be found in the ovary whenever the animal is at the rutting season, or when women are menstruating, and that *corpora lutea* follow the bursting of the vesicles in every case. Neither the presence of corpora lutea, nor of Graafian vesicles in the ovaries, is, therefore, any proof of the loss of virginity, or of a female having had access to the male. Nothing but the presence of a fecundated ovum in the uterus can prove this.—*Edinburgh Medical and Surgical Journal.*

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19. *Cæsarian Operation, in which Mother and Child were saved.* By Dr. Ziehl of Nuremberg.—The woman was thirty-three years of age, four feet high, and deformed from rickets. She fell in labor at the seventh month. On examination, a curvature of the spine was found to exist, the right shoulder was elevated, the pelvis inclined forwards and to the right, the right crest of the ilium was higher than the left, the thighs were curved, and the belly was very prominent.

The finger, introduced into the moist but narrow vagina, easily reached the promontory of the sacrum; the os uteri was considerably dilated; the antero-posterior diameter was but 1½ inch; the pelvis was narrower on the right than on the left side, and the transverse diameter was diminished one inch; the pelvimeter of Baudelocque indicated from the pubes to the spinous process of the last lumbar vertebra, a very little more than four inches. The contractions of the womb were strong; the head was not yet engaged in the pelvis; the pulsations of the heart could be distinctly heard. The child being alive, the perforation of the head was contra-indicated, and even had it been dead, embryotomy would have been more dangerous than the Cæsarian operation, which appeared the only course practicable. This was accordingly performed, the incision being made in the linea alba from the umbilicus to the pubes. A full-grown living male child was extracted. Immediately after, the placenta, which adhered to the fundus, was detached without difficulty. The loss of blood was trifling, no vessel required to be tied, and a protruding portion of membrane was easily reduced. The wound was brought together by five sutures, and the body surrounded with the starch bandage. The woman recovered without any accident, except a miliary eruption and suppuration of the wound, with sphacelation of a little of the cellular tissue. She was able to be out in less than two months after the operation, and the child, though not fed at the breast, is thriving well. —*Gazette Médicale de Paris*, Jan. 1844, from *the Lon. and Edin. Monthly Jour. of Med. Science*, March, 1844.

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20. *Obstetrical Properties of Powder of Colchicum.*—M. Metta has published the case of a woman in whom the powder of colchicum was employed with success as a substitute for the ergot of rye. She had an abortion at the third month, but

the placenta not being expelled, and the pains having ceased, ten grains of powdered root of colchicum were given in two doses. Half-an-hour having elapsed without any sensible effect, the same dose was repeated. Soon the orifice of the womb dilated, uterine contractions followed, and the placenta was removed by the hand in a state of decomposition.—*Journ. de Méd. et de Chirurgie*, Jan. 1844, from *Ibid.*

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TOXICOLOGY AND MEDICAL JURISPRUDENCE.

21. *Mrs. Gilmour's Trial for the alleged Poisoning of her Husband.*—Our readers will recollect that this case excited a great deal of attention in this city, some months ago, from the circumstance of its being the first instance of a demand of the kind that has occurred under the Ashburton treaty; and, for the same reason, independent of the grave nature of the charge itself, the greatest anxiety was manifested in Edinburgh. The question of her delivery to the British Government was here made to rest upon the fact of her being, or not being, insane; but at the trial of the prisoner before the High Court of Justiciary, at Edinburgh, on the 12th and 13th of January, no reference was made to this point.

In the February Number of the "London and Edinburgh Monthly Journal of Medical Science," there is contained a detailed account of the trial, comprising twenty-five closely-printed pages.

On the part of the Crown, it was clearly established that the husband had died of poison, and that this poison was arsenic. Among the witnesses who proved this beyond all doubt, was the celebrated Dr. Christison; and these facts were admitted by the prisoner's counsel. It was further proved that she had married against her will, and that, shortly before her husband's death, which occurred about five weeks after marriage, she had purchased arsenic twice, if not thrice, for the avowed purpose of killing rats. The purchase of the arsenic, she admitted; but she declared that it was for the purpose of killing herself. As the evidence was wholly circumstantial, the prisoner was entitled to the benefit of the doubt; and the jury, after about an hour's deliberation, returned the following verdict:

"The jury, after careful and mature deliberation of the evidence brought before them in this case, are unanimously of opinion that John Gilmour died from the effects of arsenic; but they find that the charge is *not proven* against the pannel at the bar as libelled."

The prisoner was then dismissed from the bar. It seems that she had been forced, against her will, to go to Liverpool, and thence to America, by her father, in consequence of the reports that she had poisoned her husband.

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MISCELLANEA.

22. *Honors to Medical Men.*—The King of the French has, upon the recommendation of Marshal Soult, Minister of War, awarded gold medals to Doctors Renand, Morean, Magail, and Vinot, for their zeal in promoting vaccination in Algeria.—*Gazette Médicale de Paris.*

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23. *Necrology.*—Dr. Eder, one of the most distinguished of the Austrian Surgeons, who had been invited by the Sublime Porte to superintend the organization of the military Hospitals at Constantinople, died in that city on the first of January last. Also, on the 9th of March, in London, Sir Henry Halford, who was the physician to four successive monarchs. Our notice of this distinguished individual has been crowded out.

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# American Medical Intelligence.

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THE MALIGNANT FEVER AT RONDOUT.—In March last we were subpœnaed to appear before the Circuit Court then sitting at Kingston, Ulster county, to give evidence touching the Malignant Fever, which prevailed at Rondout during the months of August and September last. This was a libel suit, which arose from circumstances connected with the alleged introduction of yellow fever, by the schooner Vanda. The trial was, however, postponed; and thus was the medical world deprived of the sublime spectacle of having the question of the importation and contagiousness of yellow fever, and especially as regards its introduction by the Vanda, discussed before an Esopus jury; and what is still more to be deplored, is, that, upon a question which has puzzled the greatest medical philosophers of the last age or two, we were thus deprived of the decision of a jury of the sturdy yeomanry of Ulster county!

We thus took occasion to visit Rondout, and, strange to say, we found that the enemy, the supposed yellow fever, had not yet departed, notwithstanding the mercury, in the meantime, had sunk as low as 20° below zero! We learned from Dr. Stringham, of Rondout, from Dr. Elting, who resides two miles from Rondout, and from Dr. Holt, whose residence is six miles from the same place, that the disease had continued in a more mild form, during the fall and the winter up to the time of our visit. But let us here take a rapid glance at its previous history.

In the Number of our Journal for July last, we gave an account of the then prevailing Influenza, and referred particularly to its close connection, as is shown by Noah Webster, LL.D., in his "History of Epidemics," with malignant diseases; and this is a fact which is confirmed by multiplied experience. Thus in the instance of this alleged yellow fever, we showed (vide Journal for November last) by the evidence under oath of the physicians named above, that, with the advent of influenza, all diseases, and especially those of the prevailing epidemic, gradually assumed the *bilious remittent type*. Even for a month or two before the arrival of the Vanda, cases occurred, characterized by the peculiar symptoms of *yellow suffusion of the skin and eye, redness of the conjunctiva, preternatural slowness of the pulse, the vomiting of a dark greenish fluid with flocculi floating in it, and by a great prostration of the vital powers.* This form of disease, increasing in virulence with the augmenting temperature of the season, finally reached its acmé in August and September, the unfortunate Vanda having chanced to arrive on the 14th of August. But as the disease was not arrested by frost, and not even by a winter of a very unusually low temperature, while it is very well known that yellow fever disappears with the first indication of frost, the most irrefragable confirmatory evidence of our views, taken of the disease when it raged in its most aggravated form at Rondout last summer, is thus afforded. During the autumn and winter, and even up to the last of April, this form of disease, though rendered much more mild by the season, has occurred in numerous instances; and with a general character so marked that there was no difficulty whatever

in recognizing its distinguishing features. Drs. Stringham, Elting, and Holt, related to us some marked cases; and we saw two of Dr. S.'s patients, who were then convalescent. In these cases, only one or two of the characteristic symptoms more generally appeared.

Dr. Stringham having visited this city quite recently, April 18th, he informs us that he has had three more cases since our visit to Rondout in March. At our request, he has given us the general features manifested by several cases; and of these symptoms it will suffice to present merely the prominent points relevant to the subject.

Early in March, Mrs. Derenbacker was attacked one evening with chills, and pains in the head, back, extremities, and abdomen, so severe that she screamed. At the same time, there was great prostration of the vital powers, syncope having occurred several times before Dr. S.'s arrival. Soon after, as reaction was taking place, she threw up a dark colored fluid, which formed a sediment; and this continued during the night, until a calomel cathartic began to operate. Her eyes were suffused and injected, and slightly yellow, while the skin generally was much more so. In the morning, the pain in the head was still slight, while that of the bowels had wholly disappeared. During the day, the fever was moderate, but it increased in the night. On the following day, it ceased with a profuse perspiration. The pulse, which was slow at the beginning, gradually arose. This patient we saw when convalescent.

In February, Mr. Barber was attacked; but his fever at no time ran high, nor was he confined continually to his bed. He vomited a dark bilious fluid. The conjunctiva was injected with blood, and the skin and eye were remarkably yellow. There was no depression of pulse. This patient we also saw when convalescent. In each of these patients, the peculiar marks of the disease were very apparent in the *tout ensemble* of the symptoms.

Early in April, a daughter of G. F. Von Beck, *æt.* 12, had a similar attack. It commenced with the usual premonitory symptoms of fever, with inflamed throat, violent pain in head and epigastrium, and tenderness in the latter on pressure, with a continual sensation of a heavy weight in the same organ. She vomited a colorless ropy fluid, and on the first evening, the pulse was full and hard. Bled her and gave a cathartic of calomel. Next day, the pain in head and stomach was much alleviated, as also the inflammation of the throat. This case was characterized by the peculiar slowness of the pulse, which, on the third evening, sunk, as the fever left, to a very low point, ranging from 41 to 46. In this case, there was also slight inflammation of the conjunctiva; but the skin afforded no precise indication, as it was naturally very yellow.

In the latter end of March, Eliza Parsons, a domestic in the family of James Vankenren, was attacked. Had the usual premonitory symptoms of fever; the tongue was covered with a very black fur extending near the edges, which were scarlet; and the pulse was slow and full. Prescribed calomel and salts and the usual febrifuges. On the evening of the fourth or fifth day, there was great prostration of the vital powers; a violent burning pain and a sensation of great weight were experienced in the epigastrium; and the dejections were very black. Prescribed v. s. and a blister to the epigastrium. Next day she was better; but in the evening, she vomited a dark green bilious matter, undistinguishable from what was vomited by the patients supposed to have their disease from the Vanda. In its general symptoms, this case was very like to the

fatal one of Jesup (reported in vol. i., p. 319), which commenced with a typhus form of disease.

On the 20th of March, —— Getty, who was feeble from having had a recent attack of mumps, was attacked with the usual premonitory symptoms of fever, attended with a troublesome cough. Dr. S. saw him first on the third or fourth day, when he had a bilious remittent fever complicated perhaps with slight inflammation of the lungs. Prescribed v. s. and cathartic. Next day, the patient was better; but on the day following, all the symptoms were aggravated, with difficulty of breathing and pain in the chest, epigastrium, and lower in the abdomen. Prescribed again v. s. and a cathartic. He now vomited perhaps a pint of black ropy fluid, and the dejections were also black, while the tongue had a black covering with scarlet edges. But slight relief followed the last prescription. On the fourth day, hæmoptysis occurred twice during the exacerbation of the fever. Bled him a third time with considerable immediate relief; but it proved but temporary, as on the next day there occurred considerable fever, with hæmoptysis and pain in the chest and bowels. Bled him five times during the course of the disease, and the hemorrhage finally ceased under the use of the acetate of lead, but a troublesome cough remained. The fever still continued its course, two exacerbations and remissions daily. On the third of April, there was observable a decidedly marked lemon color of the eyes, the temples, the face, and the neck. Soon after this yellow appearance, he began to sink, gasping for breath. Brandy was prescribed. These symptoms continued for several days, with a clammy skin and a pulse below the natural standard. He had the ghastly expression of countenance peculiar to the endemic, which was ushered in last June by the influenza. On the 16th of April, when Dr. S. left home for this city, the patient was convalescent, and the lemon tint was gradually disappearing.

We have thus traced the progress of this endemic from last June up to this period; and reasoning from the past, we are warranted in the prediction, unless a sudden change occurs in the elements constituting this endemic, that the approaching warm season will be marked by cases resembling in severity those that occurred last August and September.

During the last year, an epidemic fever has prevailed in Scotland, which exhibits, in many respects, a striking coincidence with the malignant disease at Rondout. We have accounts of the epidemic at Edinburgh, Glasgow, Dundee, and other towns, extracts of which will be found on a preceding page (410). We are told that it was variously designated: "at first, it was called *influenza;* afterwards, *yellow fever;* likewise, *spotted fever;* and, lastly, *common typhus.*" How like the history of the Rondout fever is this! A great number of the cases were characterized by *yellow skin, black vomit, and hemorrhage;* "and further, that the *post-mortem* appearances observed in Dundee correspond most remarkably with those observed by the French Commission in Gibraltar, in 1828; and, that at the dissections which have been made in the Infirmary, we have been particularly struck with finding, in every case, the same diseased state of the liver, which Louis considers as the anatomical character of yellow fever."

The following language is used by the Provincial Medical Journal for January 27th, 1844:

"We have before us two accounts of epidemic fevers, on opposite sides of

the Atlantic, which prevailed about the same time, and presented nearly the same phenomena. Both are drawn up by gentlemen (Dr. Forry and Dr. Cormack) who personally investigated the disease in question, and both of whom are well qualified for the task."

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*Dr. Post's new Instrument for Lithotomy.*—In our last number, this instrument was described, accompanied with an engraving; but since then, Dr. P. has had an opportunity of testing the operation on the living subject; and the result, as appears by the following details of the case, would seem to have been highly satisfactory:

"Charles Denny, a boy of good constitution, three years of age, was brought to me in the month of November, 1843, having had symptoms of irritation of the bladder during the period of five months preceding. I sounded him, and detected the presence of a small calculus in the bladder.

"On the 20th of March, 1844, I performed the operation according to the method above described, making an incision into the neck of the bladder about three-fourths of an inch in breadth. On removing the prostatotome, I introduced a forceps and extracted the stone, which was of a small size, weighing, when dried, forty-three grains. The stone was subsequently analyzed by Professor Draper of the New York University, and found to consist of the Urate of Ammonia. The patient bore the operation remarkably well.

"From the time of the operation there was no incontinence of urine, but the patient passed it each time by a voluntary effort through the wound. At the end of twenty-four hours, a part of the urine began to pass through the natural channel. At the end of forty-eight hours, the whole quantity came through the natural passage, and since that time, no portion of it has flowed through the wound. After the lapse of forty-eight hours from the time of the operation, I found the patient seated on a low chair, amusing himself with his toys. On the sixth day he walked about the room and played most of the day, apparently without fatigue: and since that time, his sports have not been interrupted.

"April 3d. The patient continues to gain strength, and is now in the enjoyment of better health than before the operation. The wound in the perineum is rapidly contracting, and for several days past has been so free from soreness, that he has been able to sit astride of a bench, playing horse.

"April 13th. The wound is nearly cicatrized, and the patient is in the enjoyment of full health."

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*A Correction.*—We are requested by Dr. A. S. Wotherspoon to state that, in the essay published in the last number of the Journal, on "Some Cases of a rare Form of Exanthem," he omitted to mention that the first two of the cases recorded as occurring in the New York City Hospital, were under the care of Dr. Francis U. Johnson, and the third under that of Dr. John A. Swett, both attending physicians of the institution. The diagnosis was small-pox, and this opinion was adhered to, though strongly opposed by many who were inclined to look upon them as cases of purpura or scarlatina.

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*Value of a Poultice previous to Leeching* by J. H. Ross, of New York.—Every practitioner who is familiar with the operation of leeching, is aware that it is a tedious process at best; that it requires much time, and frequently more strength and patience than the patient can command. Any preliminary step, therefore, that will obviate the necessity of subjecting the patient to the great length of time which is frequently unavoidably occupied in making the leech bite, and will facilitate their filling and the subsequent bleeding, must be considered a matter of no small importance. These indications are fulfilled by the application

of a poultice an hour previous to leeching. The value of the poultice is at least twofold. The leecher and patient are both materially benefited, as it saves much time. It first makes the part very acceptable to the leech; for, ten chances to one if the patient has not applied everything but the right one to the part before sending for a physician; to all which, and almost everything else, except blood and clean water, the leech has a decided antipathy. When the part has been well poulticed, these substances are removed, together with the secretions of the skin, and other offensive accumulations. But this is not all; for the skin not only becomes clean, but *soft* and *wet;* and this condition is peculiarly favorable to the leech, which, in its native abode, *never comes in contact with a dry substance.* Thus we see that many will bite in the water, that will not bite out of it. A poultice or fomentation seems to work admirably in preparing the part for their delicate organs of touch and taste, as they fasten upon such a part without the least delay, unless the poultice has been strongly medicated. Authors mention many applications; but, in my experience, nothing is equal to a poultice for making the leech bite. Besides this, the leech fills in much less time, and the subsequent bleeding is greatly facilitated. The leecher or physician may also be greatly deceived in certain cases without this precaution. I have often had cases where there was so little circulation in the part that it seemed as if the leeches could never fill; and after dropping off, the blood scarcely stained at all; and yet, by the influence of a poultice, I have seen the bleeding become so profuse that it could hardly be stopped. This is especially apt to occur on the abdomen, than which no other part is more benefited by such an application. When the bleeding is thus modified, it may be carried to a dangerous extent, while no one suspects it, especially in young subjects. Again, the bleeding may be entirely arrested before the poultice removes the rigidity of the part, unloads the congested vessels, or gives them a chance to exercise their proper functions by inviting the circulation to the surface. Now, while the circulation is thus obstructed, it is impossible to say what the subsequent bleeding will be after relaxation occurs; and, as it is common for all to apply a poultice or fomentation *after* leeching, much will also depend upon the manner in which it is done. Many apply a thick paste, made of bread and milk, directly to the skin, which has a tendency to act as a compress. Indian meal makes a good poultice for this purpose, because it is prone to become dry; and for this reason, it makes the poorest poultice for anything else. It is better to envelope even this in a cloth (and flannel is the best), as it is a poor conductor and good absorbent, and keeps up a slight friction. Much less poulticing will generally be required after leeching, when the part has previously been fomented, as it is in the best possible condition for bleeding at once. It is admitted that there may be cases, though rare, where warm applications are contra-indicated; also where the application could not be conveniently made. It is true there are also many cases where the bleeding will be sufficient without any application before or after leeching. But the value of the poultice, independent of leeching, is great, but I believe too little known. It certainly depletes the part, moderates excitement, allays irritation, removes congestion, diminishes inflammation, and checks pain. Now, as there are cases not unfrequently where there is no time for delay, and where an immediate application is almost the only hope of successful treatment, and as so simple a preparatory measure as the application of a poultice will certainly

save time, probably save pain, and possibly save life, I would respectfully suggest to the profession the propriety of testing its value.

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*Professor Gouraud's System of Mnemotechny, or of Artificial Memory.*—Having attended this course of lectures *gratis*, by virtue of our editorial function, it is due both to the Professor and our readers, to state our impressions. Having thus become familiar with the principles and applications of the system, we are enabled to speak of its merits; and we here introduce the subject as pertaining to the laws of physiology. It is not our intention, however, to *explain* the system, inasmuch as we should thus incur the penalties of an infringement of the law of copyright.

As natural memory depends upon some *association of ideas*—a mode universally pursued, however arbitrary and however unconscious to the individual—Prof. G. has availed himself of this natural tendency of the human mind; and he has thus built up *a uniform system of association*, which, free from arbitrariness, is simple and subjected to undeviating philosophical rules. Such attempts have been often heretofore made, but never with much success; and it is to that of Feinagle, a German, that Prof. Gouraud acknowledges his indebtedness for the fundamental hint which gave rise to his system. The whole credit of its development, however, fairly belongs to Prof. Gouraud. This artificial assistance to the powers of memory, is based upon two principles: the one is, that as there are *ten* figures, from 0 to 9, whose combination represents all possible *numbers*, so there are but *ten* articulations, as distinguished from sounds and vowels, in all known languages, both living and dead, whose combination and slight modification, form all possible *words*. Now as any number can be thus represented by some word or words (not the arbitrary and unmeaning collection of letters used by other Mnemotechnists), it follows, as is done by the second principle, that the event may readily be connected by some powerful association, with the word or words, which signify the numbers, or, indeed, any other object of memory. Thus to recollect when the thermometer was invented, it is necessary to associate with it the word *Canada*, which is equivalent to 1721. This association is facilitated by remembering the following: "*Thermometers* have often their mercury frozen by the bleak winters of *Canada*."

The patience and ingenuity, not to speak of the philosophical turn of mind, required to develope this system from its germ, to elaborate it in its minutest details, must excite, in those who appreciate it fully, the greatest wonder. We have witnessed the application of this method to figures, as, for instance, chronology, to the mathematical problem of "the ratio of the diameter to the circumference of the circle with 154 decimals," to latitudes and longitudes, the elevations of mountains, specific gravities, statistics, extended nomenclatures, and lastly, as "the golden key to the kingdom of the universe," in which the elements of all the planets are comprised; and it was surprising to see with what facility an almost endless series of figures could be put down upon the black board, with, in truth, unerring certainty. The same system, we are told by the Professor, has been adapted by him to the acquisition of languages, poetry and prose, and to perhaps all the natural sciences. A person may thus readily treasure up in the memory by this artificial system, what could not possibly be acquired by the natural memory.

At the bringing together of his two classes at the conclusion of his

course of lectures, in the Tabernacle, the triumph of the Professor was complete; for when resolutions the most favorable to his system were proposed, the unanimous voice of more than 2,000 pupils arose. Yet after all, candor compels us to say, that we are not conscious of having derived from the system, so far as taught, any very marked *practical* advantage.

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*Substantial Testimony of merit to Dr. William Darling, from his Class.*—At a meeting of the members of Dr. D.'s Anatomical Class, held Feb. 21, 1844, it was unanimously resolved, "That we have the highest opinion of Dr. William Darling, as a teacher of Anatomy, and of his character both as a gentleman and a scholar; and, in consideration of his kindness and attention to us, during the present course, we will present him with some testimonial of our gratitude and respect." The donative consisted of a splendid case of surgical instruments.

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*Case of Extirpation of the Parotid Gland as early as* 1805.—It appears from the American Journal of the Medical Sciences, for April, 1844, that this operation was performed by Dr. John McClellan, of Green Castle, Franklin county, Pa., on a female, aged fifty years, as long ago as the 14th of May, 1805. As we have a personal knowledge of Dr. McClellan, who, notwithstanding 83 years of age, still performs a critical operation occasionally, we can vouch for the trustworthiness of the account.

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*New Work on the Laws of Population and Mortality.*—The Editor of this Journal has now in preparation a volume on the general law of population and mortality, with special reference to the United States, the latter being based upon the six censuses and other data. Accompanying it will be a condensed view of general hygiène or state-medicine, in its relations to vital statistics, as regards the promotion of general longevity and happiness. If such persons among our readers who are in possession of data of this kind, would transmit them immediately to our address, the favor conferred would be acknowledged in its appropriate place.

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*Weber's Anatomical Atlas of the Human Body in Natural Size.*—We heartily congratulate the profession upon the re-production of this great work in our own country. The volume consisted originally of 84 plates; but this, the last edition, has six additional ones, comprising all the latest discoveries in anatomy, that is, in osteology, syndesmology, myology, angeiology, the nerves, the organ of hearing, and the veins of the head, neck, and brain. It also comprehends all the latest microscopic discoveries in anatomy. The author is a professor at the Royal Prussian University, Frederick William, at Bonn. To say aught in favor of a work which has attained the high character of this one, is wholly unnecessary; but as regards the lithographic execution of the American edition, one word is requisite. To say that it is the work of Endicott, upon whom will rest the whole pecuniary responsibility of the enterprise, is a sufficient guarantee for its completion. We can bear our own testimony to the fact that, as regards the 84 original plates, the American edition will be far superior in artistic execution to the German; but the six German supplementary plates are so well executed, that to rival them in beauty will be sufficient credit.

The work will be issued in numbers, the first of which will very soon be presented to the profession.

*The Bulletin of Medical Science.*—We can assure our friend of the Bulletin that notwithstanding his rather undignified remarks in his last number, we have never had any cause to find fault with his editorial justness. On the contrary, every number of our Journal shows the uniform respect which we have always entertained for whatever proceeds from his pen. In giving place to the notice of Dr. Condie's book, it never for a moment occurred to us, that it could possibly contain a charge so sweeping as to include the impartial editor of the Bulletin. Indeed, it shall hereafter be our earnest endeavor to keep our pages clear from everything, at which any of our brother-editors can possibly take umbrage. If there has been any *boasting*, it was commenced in the Philadelphia Examiner of the 27th January; and this demanded a reply in self-defence. We have now resolved to have our *say*, which will be found in the address "To our Patrons," contained in this number.

The Editor is mistaken in supposing that the Medical Repository was sustained by Dr. Hosack. As it was hostile to his views of yellow fever, Dr. H. conducted a Journal, in opposition, for four years.

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*The Sydenham Library.*—We would urge, with the greatest earnestness, upon our readers the importance of the following advertisement. Such an opportunity of obtaining rare and valuable medical works, and at the most moderate prices too, has surely never before been presented. Besides, the opportunity of subscribing once lost, it can never be regained as regards the books already published.

The undersigned would again call the attention of the profession to the SYDENHAM LIBRARY, some notice of which was given in the last number of this Journal. As the objects of the Association were there stated in full, it is unnecessary to repeat them here. I wish, however, to request all who intend to subscribe, to send in their names with their subscriptions ($5 post-paid) to H. G. Langley, Bookseller, 8 Astor House, or to the subscriber, 418 Hudson street, without delay, as no more copies will be ordered, than are subscribed and paid for. It is expressly understood that none can be obtained by orders through booksellers, and that no more copies will be printed than sufficient to supply subscribers. The following works, which are in course of publication in London, will be ordered for subscribers, by the steam packet of June or July: Hasse's "*System of Pathological Anatomy*," translated from the German, and edited by Drs. Swaine and Alexander Ure, Esq. This is considered the most complete work on the subject which has yet appeared. 2. Hecker's "*Histories of the Epidemics of the Middle Ages*," with a prefatory notice, and an appendix by the author; translated and edited by B. G. Babington, M.D., F.R.S. 3. *A Complete Edition of Sydenham's Works in Latin*, edited by Dr. Greenhill, of London. The above works are all promised for $5, and perhaps one or more of the following, depending upon the number of subscribers: 1. *The Medical Works of Paulus Æginetæ*, translated and edited by Francis Adams, Esq., with a commentary, comprising a complete view of the knowledge possessed by the Greeks, Romans, and Arabians, on all subjects connected with medicine and surgery. 2. *The Complete Works of* HARVEY, in English. 3. The Complete Works of SYDENHAM, in English. 4. The Complete Works of HEWSON, in English. 5. A Translation from the German of SCHWANN's Work, on the "*Intimate Structure of Animals and Vegetables.*"

CHARLES A. LEE, Honorary Local Secretary.

*New York, April 20th*, 1844.

"*The Epidemics of the Middle Ages*," translated by Dr. Babington, is just published in London. The British and Foreign Medical Review, for April, in noticing this work, remarks:—

"We observe by the list appended to the volume, that the number of members of the Sydendam Society, at the time of going to press, was within a few of 1,600! and we have reason to believe that new names are coming in daily. It no longer then admits of doubt that this Society will eventually comprehend the majority of the members of our profession in the three kingdoms. Its present triumphant success need excite little surprise when this single fact is considered, that the subscribers will annually receive back, in the shape of valuable books, *double* the amount of their contributions.

"The present beautiful volume is one of three (possibly of four) to be presented to the subscribers of 1843. These volumes, if published (by booksellers), would probably sell for fourteen shillings (sterling) each. Two other books of the same size, or larger, viz., 'The *Latin* SYDENHAM' (the *English* will be delivered next year), and the translation of the new edition of '*Louis on Phthisis*,' are nearly through the press, and will soon be ready for the members.

"All things considered, we regard the foundation of the SYDENHAM SOCIETY as one of the most important events that has taken place in the history of the profession in this country during the present century. The fact of so very large a number of practitioners being enrolled members of it within the first year, and in every part of the kingdom, gives reasonable grounds for hoping that the taste for good, sound medical literature is again reviving, and will, eventually, most beneficially qualify, if it do not entirely supersede, that depraved appetite for mere medical gossip, and the frothy inanities of extemporaneous journalism, which has obtained such a head in this country, during the last twenty years."

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*Graduates of the New York Schools.*—The two following alphabetical lists give the names of the candidates upon whom the degree of M.D. was conferred, at the last annual commencement of each:

"*College of Physicians and Surgeons.*—James H. Allen, A.M.; James Altham; John Van Dyk Berier, A.B.; Wm. Blackwood; Robert F. Brewer; David T. Brown; John H. Brush; John J. Crane, A.M.; Thos. W. Foster; Charles L. Frost; John S. Gardner, A.M.; Jeremiah C. Garland; Charles B. Gill; Philo P. Greenly; Alexander Greig; John C. Hubbard; Anthony D. Morford; Francis J. Morse; Patrick A. M'Barron; Samuel J. Osborn; Alexander Perry; Joel R. Ross; Thomas Ryerson, A.M.; Der M. Senakerim, A.M; John Snowden; De Witt Tappan; Valentine Vermilyea; Cyrus F. Ward, A.M.; Claudius B. Webster, A.B.; Ferdinand L. Wilsey; Joseph Winterbotham; John Young. The degree of Doctor of Medicine is also conferred upon the following gentlemen, absent by permission:—Samuel Healy; Samuel S. Migener.

"*University of New York.*—James N. Alford, S. C.; J. F. Arrowsmith, N. J.; Christopher V. Barnett, N. Y.; Edw. Bayard, Del.; Wm. H. Beatty, N. C.; Wm. P. Bell, Pa.; Elbert Bland, S. C.; Jas. H. Bogardus, N. Y.; Chas. Bonner, Ala.; Thos. H. Brown, N. C.; Thos. E. Burtsell, N. Y.; —— Bruce; Jas. A. Carmichael, Va.; Jas. D. Caulfield, Va.; Seth P. Chapin, Conn.; Elihu D. Cherry, S. C.; Edw. L. Chichester, N. Y.; Francis V. Clark, Pa.; A. S. Combs, N. J.; Alex. J. Dallas, N. Y.; Nathan Deane, Vt.; J. J. Delamater, O.; Milton K. Devane, N. C.; H. P. Dillenback, N. Y.; S. Z. Earle, N. B.; J. Edwards, Ind.; C. W. Ensign, Conn.; R. W. Evans, U. C.; J. W. Fell, N. J.; A. F. Follin, Ala.; James B. Gilbert, N. J.; John D. Goneke, Ga.; Wm. W. Green, N. C.; Geo. C. Gray, Tenn.; H. N. Guernsey, Vt.; Jas. Hamer, Pa.; N. Hanford, N. Y.; J. R. Hawes, N. C.; Thomas H. Hawks, N. C.; Samuel W. Hazlet, N. Y.; A. S. Heath, N. Y.; H. Hubbard, R. I.; E. W. Hunter, Ga.; Edward Jenkins, Md.; W. B. Klipstein, Va.; Jesse Leapheart, S. C.; N. C. Levings, N. Y.; R. Manley, N. J.; John M. Mars, S. C.; R. B. M'Cay, Pa.; J. W. Meriwether, Ala.; Thomas Milner, Ga.; Jacob Moore, Conn.; A. C. Morrogh, N. Y.; John F. Morse, Pa.; J. R. Mowbray, N. Y.; A. F. Newkirk, N. C.; J. W. Osgood, Mass.; A. Otterson, N. J.; David G. Outlaw, Tenn.; S. Allen Paddock, N. Y.; W. C. Parker, N. Y.; John E. Peck, Fa.; W. A. Player, S. C.; Henry C. Pres-

ton, Conn.; G. Prince, N. Y.; Samuel S. Purple, N. Y.; Benjamin F. Rawls, S. C.; B. Rives, Va.; J. G. Rives, N. C.; Ira Russell, Mass.; N. B. Scott, Md.; R. B. Scott, Va.; W. R. Sevier, Tenn.; C. W. Stoothoff, L. I.; W. W. Strew, N. Y.; E. Thayer, Mass.; B. W. Thompson, N. Y.; Matt. Thompson, O.; Edward Townes, Va.; James D. Traak, Mass.; A. J. Trippe, Ga.; R. A. Tucker, S. C.; F. Tuthill, L. I.; J. O. Van Hovenbergh, Ill.; C. D. Varley, N. Y.; A. C. Walker, O.; J. A. Walker, S. C.; J. H. Webb, Ala.; L. B. Wever, S. C.; H. L. Whipple, Ala.; F. Woodruff, Conn.; D. H. Bruce, Ala.

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*Transactions of the New York State Medical Society.*—We are indebted to T. Romeyn Beck, M.D., for these papers in advance of their publication; but having lent them to a friend, who has unfortunately mislaid them, we are unable to notice them in this number of the Journal. The address of the President on Insanity, however, escaped, as is seen on a preceding page, this misfortune.

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*Castleton Medical School.*—This institution seems to be in a prosperous condition. The number of students, about the middle of April, was 115, with the prospect of an augmentation.

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*Pennsylvania College.*—The two vacant chairs in this Institution have been filled by the appointment of Dr. David Gilbert to that of Surgery, and of Dr. W. L. Atlee to that of Chemistry. Both have accepted.

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*Naval Bureau of Medicine and Surgery.*—Surgeon Thomas Harris, of the United States Navy, stationed at Philadelphia, has been appointed to this bureau, in the place of Surgeon Barton, who has been removed.

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*Necrology.*—Died at Old Point Comfort, Virginia, Edward Macomb, M.D., Surgeon, United States Army.

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*Electro-Magnetism.*—We would ask attention to Dr. Ross's advertisement on the cover of the Journal. To physicians who have not provided themselves with an electro-magnetic apparatus, it is surely not unimportant to know where they may, with confidence, send their patients requiring the application of this therapeutic agent.

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*In the Press of the Harpers.*—Medicines, their Uses and Mode of Administration; including a Complete Conspectus of the three British Pharmacopœias, an account of all the new Remedies, and an Appendix of Formulæ. By J. Moore Neligan, M.D. With Notes and Additions, including Improvements in the Science, and adapting it to the Pharmacopœia of the United States. By D. M. Reese, M.D. &c.

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*Meteorological Observations.*—The Army Meteorological Register, which is continued in this Number, has now all the measures reduced to the English scale; as also the table of certain hourly observations on the barometer, taken simultaneously on the 21st of March, June, September, and December, at the suggestion of Sir John Herschel, at various points of the earth's surface.

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# HOURLY METEOROLOGICAL REGISTER.

STATION, *Fort Columbus, New York Harbor.* *Lat.* 40° 42′ *N.* *Long.* 74° 9′ *W.* *Alt. of Bar. above low water about* 25 *ft.*

| DATE. | BAROMETER. | ATTACH'D THER. | DETACH'D THER. | CLEAR. OF SKY. | WIND. | CLOUDS. | WET BULB. |
|---|---|---|---|---|---|---|---|
| March 21, 1844. | Fahrenheit. | Fahrenheit. | Fahrenheit. | | | | Fahrenheit. |
| 6 A. M. | 29·744 | 43·7° | 34° | 6 | NE 0 | NE 2 | 28° |
| 7 " | 29·693 | 45·5 | 33 | 2 | NE 2 | NE 1 | 30 |
| 8 " | 29·732 | 45·5 | 31 | 4 | NE 4 | NE 3 | 29 |
| 9 " | 29·721 | 43·7 | 31 | 0 | N 4 | 0 | 28 |
| 10 " | 29·713 | 43·7 | 33 | 2 | NW 4 | NW 1 | 29 |
| 11 " | 29·693 | 42·8 | 33 | 4 | NW 5 | NW 2 | 30 |
| 12 M. | 29·693 | 42·8 | 33 | 2 | N 4 | N 1 | 30 |
| 1 P. M. | 29·693 | 45·5 | 34 | 2 | NE 3 | NE 1 | 31 |
| 2 " | 29·693 | 45·5 | 34 | 2 | NE 2 | NE 2 | 31 |
| 3 " | 29·693 | 46·4 | 35 | 3 | NE 2 | NE 3 | 32 |
| 4 " | 29·685 | 46·4 | 36 | 5 | NE 3 | NE 2 | 33 |
| 5 " | 29·685 | 44·6 | 34 | 0 | NE 2 | NE 2 | 30 |
| 6 " | 29·685 | 44·6 | 34 | 0 | NE 2 | NE 2 | 31 |
| 7 " | 29·705 | 43·7 | 34 | 0 | NE 2 | 0 | 31 |
| 8 " | 29·732 | 42·8 | 33 | 0 | NE 4 | 0 | 30 |
| 9 " | 29·732 | 42·8 | 32 | 0 | NE 5 | 0 | 29 |
| 10 " | 29·732 | 42·8 | 32 | 0 | NE 4 | 0 | 29 |
| 11 " | 29·713 | 42·8 | 31 | 0 | NE 5 | 0 | 28 |
| 12 " | 29·705 | 44·6 | 30 | 0 | NW 4 | 0 | 28 |
| 1 A. M. | 29·705 | 44·6 | 30 | 0 | NW 5 | 0 | 28 |
| 2 " | 29·666 | 46·4 | 29 | 0 | NE 5 | 0 | 26 |
| 3 " | 29·650 | 46·4 | 29 | 0 | NE 5 | 0 | 26 |
| 4 " | 29·685 | 46·4 | 29 | 0 | NE 2 | 0 | 26 |
| 5 " | 29·705 | 46·4 | 30 | 0 | N 1 | 0 | 27 |
| 6 " | 29·772 | 42·8 | 30 | 8 | N 0 | N 2 | 27 |
| MEAN . . . | 29·705 | 44·53 | 32 20 | 1·60 | | | 29.08 |

# METEOROLOGICAL

STATION, Fort Columbus, New York Harbor. Latitude 40° 42′ North. Longitude 74° 9′ West. Altitude of Barometer

| 1844. | BAROMETER. | | | | THERMOMETER ATTACHED. | | | | THERMOMETER DETACHED. | | | | | CLEARNESS OF THE SKY. | | | | WIND. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Febru'ry | Sunrise. | 9 A. M. | 3 P. M. | 9 P. M. | Sunrise. | 9 A. M. | 3 P. M. | 9 P. M. | Sunrise. | 9 A. M. | 3 P. M. | 9 P. M. | Daily Mean. | Sunrise | 9 A. M. | 3 P. M. | 9 P. M. | Sunrise. | 9 A. M. | 3 P. |
| | Fahr. | Fahr. | Fahr. | Fahr. | Fahr. | Fahr. | Fahr. | Fahr. | Fahr. | Fahr. | Fahr. | Fahr. | Fahr. | | | | | | | |
| 1 | 30·146 | 30·185 | 29·961 | 29·921 | 8·6° | 12·2° | 24·8° | 24·8° | 8° | 10° | 24° | 24° | 16° | 10 | 10 | 10 | 0 | NW 1 | NW 1 | S |
| 2 | 30·010 | 30·016 | 30·028 | 30·000 | 28·4 | 29·3 | 30·2 | 30·2 | 28 | 29 | 31 | 30 | 29·5 | 0 | 0 | 0 | 0 | NE 0 | NE 1 | N |
| 3 | 30·059 | 30·059 | 30·099 | 30·079 | 24·8 | 26·6 | 30·2 | 19·4 | 24 | 26 | 31 | 19 | 27·5 | 10 | 10 | 10 | 10 | N 0 | N 0 | N |
| 4 | 30·107 | 30·057 | 30·067 | 30·079 | 15·8 | 19.4 | 28·4 | 17·6 | 16 | 19 | 29 | 18 | 22·5 | 10 | 10 | 10 | 10 | NE 0 | NE 0 | N |
| 5 | 30·079 | 30·057 | 30·079 | 30·118 | 25·7 | 27·5 | 29·3 | 27·5 | 24 | 28 | 30 | 28 | 27 | 0 | 0 | 0 | 0 | NE 0 | NE 1 | N |
| 6 | 29·988 | 29·988 | 30 000 | 30·000 | 30·2 | 33·8 | 35·6 | 32 | 30 | 32 | 34 | 30 | 32 | 0 | 0 | 0 | 0 | NE 1 | NE 0 | N |
| 7 | 29·981 | 29·949 | 29·961 | 29·988 | 25·7 | 32 | 41 | 30·2 | 25 | 30 | 40 | 30 | 32·5 | 10 | 10 | 10 | 10 | W 1 | W 0 | S |
| 8 | 29·685 | 29·713 | 29·725 | 29·725 | 30·2 | 30·2 | 30·2 | 26·6 | 30 | 30 | 30 | 26 | 30 | 0 | 0 | 10 | 0 | NE 1 | N 1 | N |
| 9 | 29·713 | 29·713 | 29·685 | 29·725 | 19·4 | 24·8 | 24·8 | 12·2 | 20 | 24 | 24 | 12 | 22 | 10 | 10 | 6 | 10 | W 3 | NW 2 | N |
| 10 | 29·764 | 29·882 | 30·217 | 30·217 | 15·8 | 15·8 | 24·8 | 20·3 | 15 | 16 | 24 | 20 | 19·5 | 0 | 3 | 0 | 0 | W 0 | W 2 | W |
| 11 | 29·961 | 29·921 | 30·170 | 30·107 | 23 | 25·7 | 34·7 | 20·3 | 22 | 24 | 34 | 20 | 28 | 10 | 10 | 10 | 10 | N 1 | N 0 | N |
| 12 | 30·079 | 30·225 | 30·197 | 30·236 | 21·2 | 25·7 | 34·7 | 27·5 | 22 | 24 | 34 | 28 | 28 | 0 | 10 | 10 | 10 | NE 0 | NE 1 | N |
| 13 | 30·276 | 30·254 | 30·256 | 30·225 | 24·8 | 32 | 38·3 | 31·1 | 24 | 31 | 38 | 32 | 31 | 10 | 4 | 4 | 10 | S 1 | SW 1 | S |
| 14 | 30·185 | 30·185 | 30·185 | 30·185 | 29 3 | 35·6 | 38·3 | 26·6 | 29 | 35 | 39 | 26 | 34 | 10 | 8 | 0 | 0 | W 1 | W 1 | N |
| 15 | 30·185 | 30·217 | 30·173 | 30·107 | 24·8 | 27·5 | 36·5 | 36·5 | 26 | 28 | 36 | 36 | 31 | 0 | 0 | 0 | 0 | N 1 | NE 1 | E |
| 16 | 29·961 | 29.961 | 29·941 | 29·882 | 42·8 | 44·6 | 46·4 | 48·2 | 32 | 35 | 40 | 35 | 36 | 10 | 8 | 0 | 0 | SW 1 | NW 1 | N |
| 17 | 29·890 | 29·894 | 29·882 | 29·882 | 46·4 | 46·4 | 47·3 | 49·1 | 30 | 36 | 38 | 30 | 34 | 4 | 6 | 8 | 0 | SW 2 | SW 2 | S |
| 18 | 29·929 | 30·095 | 30·107 | 30·126 | 37·4 | 38·3 | 45·5 | 43·7 | 16 | 16 | 27 | 25 | 21·5 | 10 | 10 | 6 | 10 | NW 5 | NW 4 | N |
| 19 | 30·134 | 30·146 | 30·185 | 30·162 | 41 | 43·7 | 49·1 | 50·9 | 26 | 34 | 41 | 34 | 33·5 | 10 | 10 | 10 | 10 | SW 2 | W 1 | W |
| 20 | 30·138 | 30·138 | 30·087 | 30·067 | 46·4 | 46·4 | 51·8 | 51·8 | 31 | 34 | 48 | 39 | 39·5 | 10 | 10 | 10 | 10 | SW 1 | SW 1 | S |
| 21 | 29·929 | 29·929 | 29·898 | 30·666 | 49·1 | 48·2 | 46·4 | 39·2 | 34 | 36 | 45 | 37 | 39·5 | 9 | 7 | 0 | 0 | W 1 | W 2 | W |
| 22 | 29·890 | 29·898 | 29·898 | 30·677 | 42·8 | 39·2 | 45·5 | 37·4 | 32 | 38 | 45 | 38 | 38·5 | 8 | 9 | 10 | 10 | W 2 | W 3 | W |
| 23 | 29·890 | 29·898 | 29·811 | 29·815 | 43·7 | 44·6 | 50 | 38 3 | 33 | 35 | 45 | 37 | 39 | 6 | 6 | 2 | 0 | W 1 | W 1 | W |
| 24 | 29·815 | 29·847 | 29 886 | 29·949 | 50 | 50 | 50 | 42·8 | 31 | 31 | 30 | 24 | 30·5 | 0 | 0 | 10 | 10 | NE 5 | NE 5 | NE |
| 25 | 30·122 | 30·122 | 30·185 | 30·158 | 40·1 | 41·9 | 47·3 | 44·6 | 17 | 18·5 | 32 | 26 | 24·5 | 10 | 10 | 10 | 10 | NE 2 | NE 2 | NE |
| 26 | 30·185 | 30 225 | 30·233 | 30·185 | 41·9 | 45·5 | 52·7 | 44·6 | 22 | 25 | 40 | 32 | 31 | 10 | 10 | 10 | 10 | W 0 | W 1 | W |
| 27 | 30·000 | 30·000 | 29·921 | 29·921 | 44·6 | 46·4 | 47·3 | 44·6 | 32 | 34 | 37 | 33 | 34·5 | 0 | 0 | 0 | 2 | NW 0 | NW 0 | N |
| 28 | 29·949 | 29·888 | 30·051 | 30·134 | 48·2 | 51·8 | 56·3 | 50 | 34 | 34 | 38 | 36 | 36 | 0 | 10 | 10 | 10 | NE 4 | NE 4 | NE |
| 29 | 30·150 | 30·158 | 30·158 | 30·158 | 46·4 | 51·8 | 48·2 | 44·6 | 33 | 38 | 45 | 39 | 39 | 10 | 10 | 4 | 10 | W 2 | W 1 | W |
| Monthly Mean. | 30·008 | 30·022 | 30·036 | 30·086 | 33·40 | 35·75 | 40·20 | 34·92 | 25·72 | 28·64 | 35·50 | 29·10 | 30·60 | 6·10 | 6·60 | 6·00 | 5·60 | | | |

# METEOROLOGICAL REGISTER.

40° 42′ North. Longitude 74° 9′ West. Altitude of Barometer above low water, about twenty-five

| MOMETER DETACHED. | | | CLEARNESS OF THE SKY. | | | | WIND. | | | | CLOUDS. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | 3 P. M. | 9 P. M. | Daily Mean. | Sunrise | 9 A. M. | 3 P. M. | 9 P. M. | Sunrise. | 9 A. M. | 3 P. M. | 9 P. M. | Sunrise. | 9 A. M. | 3 P. M. | 9 P M |
| | Fahr. | Fahr. | Fahr. | | | | | | | | | | | | |
| | 24° | 24° | 16° | 10 | 10 | 10 | 0 | NW 1 | NW 1 | S 0 | SE 0 | 0 | 0 | 0 | 0 |
| | 31 | 30 | 29·5 | 0 | 0 | 0 | 0 | NE 0 | NE 1 | NE 0 | NE 0 | 0 | 0 | 0 | 0 |
| | 31 | 19 | 27·5 | 10 | 10 | 10 | 10 | N 0 | N 0 | N 0 | N 0 | 0 | 0 | 0 | 0 |
| | 29 | 18 | 22·5 | 10 | 10 | 10 | 10 | NE 0 | NE 0 | NE 1 | NE 1 | 0 | 0 | 0 | 0 |
| | 30 | 28 | 27 | 0 | 0 | 0 | 0 | NE 0 | NE 1 | NE 0 | NE 2 | 0 | 0 | 0 | 0 |
| | 34 | 30 | 32 | 0 | 0 | 0 | 0 | NE 1 | NE 0 | NE 0 | NE 0 | NE 1 | 0 | 0 | NE 1 |
| | 40 | 30 | 32·5 | 10 | 10 | 10 | 10 | W 1 | W 0 | SE 0 | SE 0 | 0 | 0 | 0 | 0 |
| | 30 | 26 | 30 | 0 | 0 | 10 | 0 | NE 1 | N 1 | N 3 | NW 3 | 0 | 0 | 0 | 0 |
| | 24 | 12 | 22 | 10 | 10 | 6 | 10 | W 3 | NW 2 | NW 4 | NW 0 | 0 | 0 | NW 2 | 0 |
| | 24 | 20 | 19·5 | 0 | 3 | 0 | 0 | W 0 | W 2 | W 4 | NW 0 | 0 | W 2 | W 4 | 0 |
| | 34 | 20 | 28 | 10 | 10 | 10 | 10 | N 1 | N 0 | N 0 | N 0 | 0 | 0 | 0 | 0 |
| | 34 | 28 | 28 | 0 | 10 | 10 | 10 | NE 0 | NE 1 | NE 0 | SE 0 | 0 | 0 | 0 | 0 |
| | 38 | 32 | 31 | 10 | 4 | 4 | 10 | S 1 | SW 1 | SE 4 | SE 2 | 0 | 0 | SE 2 | 0 |
| | 39 | 26 | 34 | 10 | 8 | 0 | 0 | W 1 | W 1 | NW 1 | NW 1 | 0 | W 2 | 0 | 0 |
| | 36 | 36 | 31 | 0 | 0 | 0 | 0 | N 1 | NE 1 | E 2 | SE 0 | 0 | 0 | 0 | 0 |
| | 40 | 35 | 36 | 10 | 8 | 0 | 0 | SW 1 | NW 1 | NW 2 | NW 0 | 0 | NW 3 | 0 | 0 |
| | 38 | 30 | 34 | 4 | 6 | 8 | 0 | SW 2 | SW 2 | SW 2 | NW 5 | SW 1 | SW 1 | 0 | 0 |
| | 27 | 25 | 21·5 | 10 | 10 | 6 | 10 | NW 5 | NW 4 | NW 6 | NW 1 | 0 | 0 | NW 2 | 0 |
| | 41 | 34 | 33·5 | 10 | 10 | 10 | 10 | SW 2 | W 1 | W 2 | W 1 | 0 | 0 | 0 | 0 |
| | 48 | 39 | 39·5 | 10 | 10 | 10 | 10 | SW 1 | SW 1 | SW 0 | W 0 | 0 | 0 | 0 | 0 |
| | 45 | 37 | 39·5 | 9 | 7 | 0 | 0 | W 1 | W 2 | W 1 | W 0 | 0 | 0 | 0 | 0 |
| | 45 | 38 | 38·5 | 8 | 9 | 10 | 10 | W 2 | W 3 | W 3 | W 0 | W 3 | W 3 | 0 | 0 |
| | 45 | 37 | 39 | 6 | 6 | 2 | 0 | W 1 | W 1 | W 1 | NE 4 | 0 | 0 | W 1 | 0 |
| | 30 | 24 | 30·5 | 0 | 0 | 10 | 10 | NE 5 | NE 5 | NE 3 | NE 2 | NE 4 | NE 4 | 0 | 0 |
| | 32 | 26 | 24·5 | 10 | 10 | 10 | 10 | NE 2 | NE 2 | NE 2 | NE 1 | 0 | 0 | 0 | 0 |
| | 40 | 32 | 31 | 10 | 10 | 10 | 10 | W 0 | W 1 | W 1 | W 1 | 0 | 0 | 0 | 0 |
| | 37 | 33 | 34·5 | 0 | 0 | 0 | 2 | NW 0 | NW 0 | NW 0 | NE 4 | 0 | 0 | NW 2 | NE 3 |
| | 38 | 36 | 36 | 0 | 10 | 10 | 10 | NE 4 | NE 4 | NE 4 | NE 3 | NE 3 | 0 | 0 | 0 |
| | 45 | 39 | 39 | 10 | 10 | 4 | 10 | W 2 | W 1 | W 1 | W 1 | 0 | 0 | W 1 | 0 |
| | 35·50 | 29·10 | 30·60 | 6·10 | 6·60 | 6·00 | 5·60 | | | | | | | | |

y-five feet. Kept by JOSEPH P. RUSSELL, M. D., Medical Staff, U. S. A.

| | WET BULB. | | RAIN. | | | HYGROMETER, at 3 P.M. | | REMARKS. |
|---|---|---|---|---|---|---|---|---|
| P M | Sunrise. | 3 P. M. | Began. | Ended. | Quantity | Hygrometer. | Thermometer. | |
| | Fahr. | Fahr. | | | Inches. | Fahr. | Fahr. | |
| 0 | 6° | 22° | 9 P. M. | | | 19° | 24° | |
| 0 | 27 | 30 | | | ·30 | 28 | 31 | Snow, ended during the night, measured in substance on the ground three inches. |
| 0 | 23 | 29 | | | | 20 | 31 | |
| 0 | 15 | 28 | | | | 14 | 29 | |
| 0 | 23 | 29 | 7½ A.M. | | ·02 | 28 | 30 | Snow and sleet in course of day to 5 P. M. |
| NE 1 | 28 | 33 | 6½ P.M. | | ·20 | 30 | 34 | Rain, ended during the night, large halo around the moon. |
| 0 | 23 | 38 | | | | 22 | 40 | |
| 0 | 26 | 26 | | 2 P. M. | ·03 | 23 | 30 | Snow began in the course of the night before. |
| 0 | 19 | 20 | | | | 19 | 24 | |
| 0 | 14 | 21 | | | | | 24 | No deposit could be perceived: Ther. att'd stood at + 12. |
| 0 | 20 | 30 | | | | 18 | 34 | |
| 0 | 20 | 30 | | | | 25 | 34 | |
| 0 | 23 | 35 | | | | 32 | 38 | |
| 0 | 26 | 34 | | | | 24 | 39 | |
| 0 | 24 | 32 | 7 P. M. | | ·45 | 30 | 36 | Rain, ended in the course of the night. |
| 0 | 30 | 35 | | | | 31 | 40 | Barometer removed from out-door exposure into the Hospital (altitude about twenty-two feet above low water): room 12 by 12, one window, south-west exposure, without fire. |
| 0 | 30 | 34 | | | | 29 | 38 | |
| 0 | 14 | 24 | | | | 14 | 27 | |
| 0 | 24 | 36 | | | | 27 | 41 | |
| 0 | 30 | 42 | | | | 32 | 48 | |
| 0 | 31·5 | 35 | | | | 32 | 45 | |
| 0 | 32 | 40 | | | | 33 | 45 | |
| 0 | 32 | 42 | | | | 35 | 45 | |
| 0 | 30 | 26 | | 8 A. M. | ·03 | 20 | 30 | Snow began in the course of the night before. |
| 0 | 16 | 26 | | | | 16 | 32 | |
| 0 | 19 | 36 | | | | 25 | 40 | Large halo around the moon. |
| E 3 | 30 | 36 | 5 A. M. | 7 A. M. | | 34 | 37 | Quantity of rain inappreciable. |
| 0 | 31 | 34 | | | | 20 | 38 | |
| 0 | 30 | 40 | | | | 35 | 45 | |
| | 24·02 | 32·00 | | | 1.03 | 25·00 | 35·50 | |

STATION, Fort Columbus, New York Harbor. Latitude, 40° 4

| 1844. | BAROMETER. | | | | THERMOMETER ATTACHED. | | | | THERMOMETE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| March. | Sunrise. | 9 A. M. | 3 P. M. | 9 P. M. | Sunrise. | 9 A. M. | 3 P. M. | 9 P. M. | Sunrise. | 9 A. M. | 3 P |
| | Fahr. | Fahr | Fahr. | Fahr. | Fahr. | Fahr. | Fahr. | Fahr. | Fahr. | Fahr. | Fah |
| 1 | 30·114 | 30·122 | 30·099 | 30·099 | 46·4 | 51·8 | 54·5 | 46·4 | 37° | 43° | 49 |
| 2 | 29·914 | 29·909 | 29·902 | 29·886 | 48·2 | 51·8 | 53·6 | 50·0 | 36 | 39 | 44 |
| 3 | 29·830 | 29·890 | 29·870 | 29·831 | 48·2 | 50·9 | 51·8 | 53·6 | 38 | 38 | 44 |
| 4 | 29·811 | 29·827 | 29·870 | 29·941 | 48·2 | 48·2 | 49·1 | 44·6 | 36 | 35 | 34 |
| 5 | 30·185 | 30·185 | 30·244 | 30·244 | 39·2 | 39·2 | 48·2 | 46·4 | 21 | 23 | 35 |
| 6 | 30·166 | 30·256 | 30·41[illegible] | 30·441 | 43·7 | 46·4 | 53·6 | 46·4 | 27 | 34 | 45 |
| 7 | 30·500 | 30·500 | 30·528 | 30·[illegible]55 | 44·6 | 46·4 | 50·0 | 48·2 | 32 | 37 | 43 |
| 8 | 30·3[illegible]2 | 30·3[illegible]2 | 30·[illegible]05 | 30·099 | 44·6 | 46·4 | 48·2 | 51·8 | 38 | 42 | 45 |
| 9 | 29·981 | 29·981 | 29·920 | 29·929 | 53·6 | 54·5 | 54·5 | 51·8 | 48 | 50 | 48 |
| 10 | 29·937 | 29·937 | 29·969 | 29·969 | 44·6 | 47·3 | 55·4 | 50·0 | 33 | 35 | 46 |
| 11 | 30·059 | 30·166 | 30·106 | 30·1[illegible]6 | 44·6 | 51·8 | 57·2 | 46·4 | 33 | 41 | 52 |
| 12 | 30·177 | 30·162 | 30·162 | 30·055 | 48·2 | 49·1 | 52·7 | 44·6 | 38 | 44 | 46 |
| 13 | 29·965 | 29·965 | 29·965 | 29·977 | 53·6 | 53·6 | 51·8 | 50·0 | 47 | 47 | 49 |
| 14 | 29·898 | 29·920 | 29·902 | 30·024 | 51·8 | 55·4 | 66·2 | 58·1 | 42 | 46 | 51 |
| 15 | 30·016 | 30·016 | 30·014 | 29·965 | 48·2 | 48·2 | 50·0 | 48·2 | 37 | 39 | 40 |
| 16 | 29·886 | 29·839 | 29·780 | 29·764 | 46·4 | 48·2 | 48·2 | 48·2 | 36 | 38 | 40 |
| 17 | 29·563 | 29·551 | 29·536 | 29·551 | 48·2 | 50·0 | 55·4 | 50·9 | 38 | 43 | 50 |
| 18 | 29·563 | 29·563 | 29·551 | 29·583 | 46·4 | 47·3 | 46·4 | 44·6 | 36 | 36 | 33 |
| 19 | 29·878 | 29·914 | 29·957 | 29·9[illegible]9 | 40·1 | 41·0 | 46·4 | 41·0 | 25 | 31 | 34 |
| 20 | 29·9[illegible]9 | 29·918 | 29·[illegible]99 | 29·740 | 42·8 | 48·2 | 50·0 | 48·2 | 35 | 41 | 44 |
| 21 | 29·714 | 29·721 | 29·692 | 29·732 | 43·7 | 43·7 | 46·4 | 42·8 | 34 | 31 | 35 |
| 22 | 29·772 | 29·780 | 29·780 | 29·732 | 42·8 | 43·7 | 48·2 | 46·4 | 30 | 32 | 46 |
| 23 | 29·772 | 29·7[illegible]0 | 29·792 | 29·780 | 44·6 | 43·7 | 47·3 | 44·6 | 29 | 31 | 41 |
| 24 | 29·819 | 29·839 | 29·866 | 29·8[illegible]9 | 41·0 | 42·8 | 52·7 | 46·4 | 30 | 37 | 48 |
| 25 | 29·811 | 29·811 | 29·701 | 29·898 | 46·4 | 49·1 | 53·6 | 46·4 | 38 | 41 | 48 |
| 26 | 29·929 | 29·898 | 29·866 | 29·858 | 50·0 | 51·8 | 52·7 | 48·2 | 40 | 52 | 48 |
| 27 | 29·874 | 30·0[illegible]8 | 30·0[illegible]4 | 30·055 | 46·4 | 50·0 | 53·6 | 55·4 | 46 | 47 | 48 |
| 28 | 29·969 | 29·969 | 29·969 | 29·851 | 50·0 | 47·3 | 48·2 | 48·2 | 36 | 37 | 40 |
| 29 | 29·851 | 29·[illegible]9[illegible] | 29·910 | 29·957 | 50·0 | 50·0 | 57·2 | 48·2 | 38 | 49 | 54 |
| 30 | 29·799 | 29·799 | 29·811 | 29·839 | 50·0 | 48·2 | 48·2 | 48·2 | 36 | 38 | 36 |
| 31 | 29·969 | 29·969 | 30·067 | 30·284 | 37·4 | 39·2 | 44·6 | 41·0 | 24 | 23 | 30 |
| Monthly Mean | 29·939 | 29·951 | 29·950 | 29·938 | 46·25 | 49·20 | 51·48 | 47·90 | 35·26 | 39·00 | 43 |

# METEOROLOGICAL REGIST

, 40° 42′ North, Longitude, 74° 9′ West. Altitude of Barometer above low water, ab

| RMOMETER DETACHED. | | | | CLEARNESS OF THE SKY. | | | | WIND. | | | | CLO | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| . M. | 3 P. M. | 9 P. M. | Daily Mean. | Sunrise. | 9 A. M. | 3 P. M. | 9 P. M. | Sunrise. | 9 A. M. | 3 P. M. | 9 P. M. | Sunrise | 9 A. M. |
| r. | Fahr. | Fahr. | Fahr. | | | | | | | | | | |
| ° | 49° | 39° | 43° | 4 | 0 | 4 | 10 | W 0 | W 0 | W 0 | W 0 | 0 | 0 |
| | 44 | 40 | 40 | 0 | 0 | 0 | 0 | NE 0 | E 1 | E 0 | E 0 | 0 | 0 |
| | 44 | 38 | 41 | 0 | 0 | 6 | 4 | N 1 | N 1 | N 0 | NE 0 | 0 | N 1 |
| | 34 | 25 | 35 | 0 | 2 | 8 | 0 | NE 3 | NE 1 | NW 6 | NW 2 | 0 | 0 |
| | 35 | 31 | 28 | 10 | 6 | 5 | 10 | NW 3 | NW 3 | NW 2 | NW 1 | 0 | 0 |
| | 45 | 34 | 36 | 0 | 10 | 10 | 10 | NW 2 | NW 1 | W 1 | W 2 | 0 | 0 |
| | 43 | 36 | 37·5 | 10 | 10 | 10 | 10 | SW 2 | SW 1 | S 3 | S 2 | 0 | 0 |
| | 45 | 44 | 41·5 | 0 | 0 | 0 | 0 | SE 1 | SE 1 | SE 1 | SE 1 | 0 | 0 |
| | 42 | 40 | 48 | 5 | 5 | 0 | 0 | SW 0 | W 0 | NE 1 | NW 0 | SW 2 | W 1 |
| | 46 | 40 | 39·5 | 10 | 10 | 10 | 0 | NW 1 | N 2 | NW 0 | NW 0 | 0 | 0 |
| | 52 | 41 | 42·5 | 10 | 10 | 10 | 10 | NW 0 | W 0 | SW 0 | SW 0 | 0 | 0 |
| | 46 | 42 | 42 | 0 | 4 | 5 | 0 | SE 1 | SE 3 | SE 3 | SE 3 | 0 | SE 4 |
| | 49 | 46 | 48 | 0 | 0 | 5 | 0 | SW 3 | SW 2 | W 1 | NW 0 | 0 | 0 |
| | 51 | 41 | 46·5 | 10 | 10 | 0 | 10 | NE 1 | NE 1 | NE 1 | NE 1 | 0 | 0 |
| | 40 | 36 | 38·5 | 0 | 0 | 0 | 0 | NE 1 | NE 0 | NE 2 | NW 1 | 0 | 0 |
| | 40 | 36 | 38 | 0 | 0 | 0 | 0 | NE 1 | NE 1 | NE 1 | NE 1 | 0 | 0 |
| | 50 | 44 | 44 | 0 | 5 | 6 | 0 | NE 0 | NW 1 | NW 0 | NW 0 | 0 | NW 3 |
| | 33 | 32 | 34·5 | 10 | 10 | 0 | 0 | NW 2 | SW 3 | W 6 | NW 6 | 0 | 0 |
| | 34 | 32 | 39 5 | 5 | 6 | 6 | 0 | NW 4 | NW 3 | NW 3 | NW 3 | NW 4 | NW 4 |
| | 44 | 41 | 39·5 | 10 | 10 | 0 | 0 | SW 2 | SW 4 | Sc 0 | NE 2 | 0 | 0 |
| | 35 | 32 | 34·5 | 6 | 0 | 3 | 0 | NE 0 | N 4 | NE 2 | NE 5 | NE 2 | 0 |
| | 46 | 38 | 38 | 8 | 8 | 10 | 0 | N 0 | N 1 | NE 0 | NE 0 | N 2 | N 2 |
| | 41 | 34 | 35 | 4 | 6 | 10 | 10 | SW 1 | NE 1 | NW 0 | NW 0 | SW 2 | NE 2 |
| | 48 | 42 | 39 | 10 | 10 | 10 | 0 | NW 2 | NW 1 | W 1 | W 0 | 0 | 0 |
| | 48 | 40 | 43 | 5 | 10 | 6 | 0 | SW 2 | W 1 | W 2 | W 0 | SW 3 | 0 |
| | 48 | 48 | 44 | 0 | 6 | 0 | 0 | S 2 | SW 0 | SW 1 | SW 1 | 0 | 0 |
| | 48 | 38 | 47 | 0 | 0 | 0 | 0 | SE 1 | SW 1 | SW 3 | SW 2 | 0 | 0 |
| | 40 | 37 | 38 | 0 | 0 | 0 | 0 | SE 0 | SE 0 | NE 0 | NE 0 | 0 | 0 |
| | 54 | 36 | 46 | 4 | 10 | 10 | 0 | W 0 | N 6 | NE 0 | SE 5 | 0 | 0 |
| | 36 | 34 | 35 | 0 | 0 | 0 | 0 | NE 2 | NE 2 | NE 1 | NE 3 | 0 | 0 |
| | 30 | 25 | 27 | 6 | 10 | 10 | 10 | N 3 | N 4 | NE 3 | N 0 | N 3 | 0 |
| ·00 | 43·42 | 37·48 | 39·35 | 4·00 | 5·00 | 4·64 | 2·70 | | | | | | |

# OGICAL REGISTER.

tude of Barometer above low water, about twenty-five feet. Kept by JOSEPH

| WIND. | | | | CLOUDS. | | | | WET BULB. | | RAIN | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sunrise. | 9 A. M. | 3 P. M. | 9 P. M. | Sunrise | 9 A. M. | 3 P. M. | 9 P. M. | Sunrise. | 3 P. M. | Began. | Ended. | |
| | | | | | | | | Fahr. | Fahr. | | | |
| W 0 | W 0 | W 0 | W 0 | 0 | 0 | 0 | 0 | 34o | 44° | | | |
| NE 0 | E 1 | E 0 | E 0 | 0 | 0 | 0 | 0 | 30 | 41 | 9 P.M. | | |
| N 1 | N 1 | N 0 | NE 0 | 0 | N 1 | 0 | 0 | 33 | 40 | | | |
| NE 3 | NE 1 | NW 6 | NW 2 | 0 | 0 | NW 3 | 0 | 34 | 30 | | | |
| NW 3 | NW 3 | NW 2 | NW 1 | 0 | 0 | 0 | 0 | 19 | 32 | | | |
| NW 2 | NW 1 | W 1 | W 2 | 0 | 0 | 0 | 0 | 22 | 40 | | | |
| SW 2 | SW 1 | S 3 | S 2 | 0 | 0 | 0 | 0 | 28 | 40 | | | |
| SE 1 | SE 1 | SE 1 | SE 1 | 0 | 0 | 0 | 0 | 34 | 42 | 9 A. M. | 5 P. M. | |
| SW 0 | W 0 | NE 1 | NW 0 | SW 2 | W 1 | 0 | 0 | 45 | 44 | | | |
| NW 1 | N 2 | NW 0 | NW 0 | 0 | 0 | 0 | 0 | 30 | 41 | | | |
| NW 0 | W 0 | SW 0 | SW 0 | 0 | 0 | 0 | 0 | 30 | 47 | | | |
| SE 1 | SE 3 | SE 3 | SE 3 | 0 | SE 4 | SE 4 | 0 | 34 | 40 | 6 P. M. | | |
| SW 3 | SW 2 | W 1 | NW 0 | 0 | 0 | 0 | 0 | 45 | 46 | 5 P. M. | 7 P. M. | |
| NE 1 | NE 1 | NE 1 | NE 1 | 0 | 0 | 0 | 0 | 39 | 48 | | | |
| NE 1 | NE 0 | NE 2 | NW 1 | 0 | 0 | 0 | 0 | 34 | 36 | 1 P. M. | | |
| NE 1 | NE 1 | NE 1 | NE 1 | 0 | 0 | 0 | 0 | 35 | 37 | 10½ A.M. | 9½ P.M. | |
| NE 0 | NW 1 | NW 0 | NW 0 | 0 | NW 3 | NW 2 | 0 | 36 | 46 | | | |
| NW 2 | SW 3 | W 6 | NW 6 | 0 | 0 | 0 | 0 | 33 | 30 | 2 P. M. | 5 P. M. | |
| NW 4 | NW 3 | NW 3 | NW 2 | NW 4 | NW 4 | NW 5 | 0 | 23 | 30 | | | |
| SW 2 | SW 4 | Sc 0 | NE 2 | 0 | 0 | 0 | 0 | 31 | 40 | 2½ P. M. | 3½ P.M. | |
| NE 0 | N 4 | NE 2 | NE 5 | NE 2 | 0 | NE 2 | 0 | 28 | 32 | | | |
| N 0 | N 1 | NE 0 | NE 0 | N 2 | N 2 | 0 | 0 | 27 | 42 | | | |
| SW 1 | NE 1 | NW 0 | NW 0 | SW 2 | NE 2 | 0 | 0 | 26 | 38 | | | |
| NW 2 | NW 1 | W 1 | W 0 | 0 | 0 | 0 | 0 | 27 | 44 | | | |
| SW 2 | W 1 | W 2 | W 0 | SW 3 | 0 | W 2 | 0 | 34 | 45 | | | |
| S 2 | SW 0 | SW 1 | SW 1 | 0 | 0 | 0 | 0 | 36 | 44 | 1 P. M. | 5½ P.M. | |
| SE 1 | SW 1 | SW 3 | SW 2 | 0 | 0 | 0 | 0 | 42 | 45 | | | |
| SE 0 | SE 0 | NE 0 | NE 0 | 0 | 0 | 0 | 0 | 32 | 36 | | 6 A.M. | |
| W 0 | N 0 | NE 0 | SE 5 | 0 | 0 | 0 | 0 | 34 | 50 | 9. P M. | | |
| NE 2 | NE 2 | NE 1 | NE 3 | 0 | 0 | 0 | 0 | 34 | 33 | | 7 A.M. | |
| N 3 | N 4 | NE 3 | N 0 | N 3 | 0 | 0 | 0 | 21 | 28 | 6½ P.M. | | |
| | | | | | | | | 32·0 | 39·70 | | | |

EPH P. RUSSELL, M. D., Medical Staff, U. S. A.

| AIN | | HYGROMETER, at 3 P.M. | | REMARKS. |
|---|---|---|---|---|
| nded. | Quantity. | Hygrometer. | Thermometer. | |
| | Inches. | Fahr. | Fahr. | |
| | | 40° | 49° | Slight fog in the morning to 8½ A. M. Rain ended in the course of the night. |
| | ·06 | 36 | 44 | |
| | ·23 | 33 | 44 | In a rain-gauge situated in the middle of the hospital yard, four feet from the ground, and about 40 feet from any building; ·04 in the gauge on the hospitel roof. Began and ended in the course of the night: 18 in the gauge on the roof, 35 feet high. |
| | | 21 | 34 | |
| | | 18 | 35 | |
| | | 16 | 45 | |
| | | 14 | 43 | |
| P. M. | ·11 | 35 | 45 | |
| | ·02 | 18 | 48 | In the course of the night, slight fog in the morning to 8 A. M. |
| | | 16 | 46 | |
| | | 14 | 52 | |
| | | 19 | 46 | |
| P. M. | ·74 | 40 | 49 | Gauge on the roof 60. |
| | | 40 | 51 | |
| | | 28 | 40 | |
| P.M. | 1·80 | 31 | 40 | Gauge on the roof 58. |
| | | 30 | 50 | Gauge on the roof 75. |
| P. M. | ·09 | 30 | 33 | Rain and snow, with passing showers, until 5 P. M.; gauge on the roof 102. |
| | | 30 | 34 | |
| P.M. | ·03 | 36 | 44 | Squall began at 2 P. M., ended 2½ P. M. Bar. 29·732, Ther. attached 48. |
| | | 30 | 35 | |
| | | 24 | 46 | |
| | | 22 | 41 | |
| | | 18 | 48 | |
| | | 19 | 48 | |
| P.M. | ·05 | 40 | 48 | |
| | | 32 | 48 | |
| .M. | ·17 | 30 | 40 | Slight spray till noon; foggy all day. |
| | ·03 | 21 | 54 | Rain during the day and night. |
| .M. | ·65 | 30 | 36 | Rain at intervals during the day. |
| | ·02 | 20 | 30 | Rain ended during the night before; thunder and lightning at 6½ P.M. Rain and hail; hail frozen solid in the gauge, end at 12 P. M. at night. |
| | ·50 | | | |
| | 4·50 | 27·0 | 43·42 | |